CHEETAL

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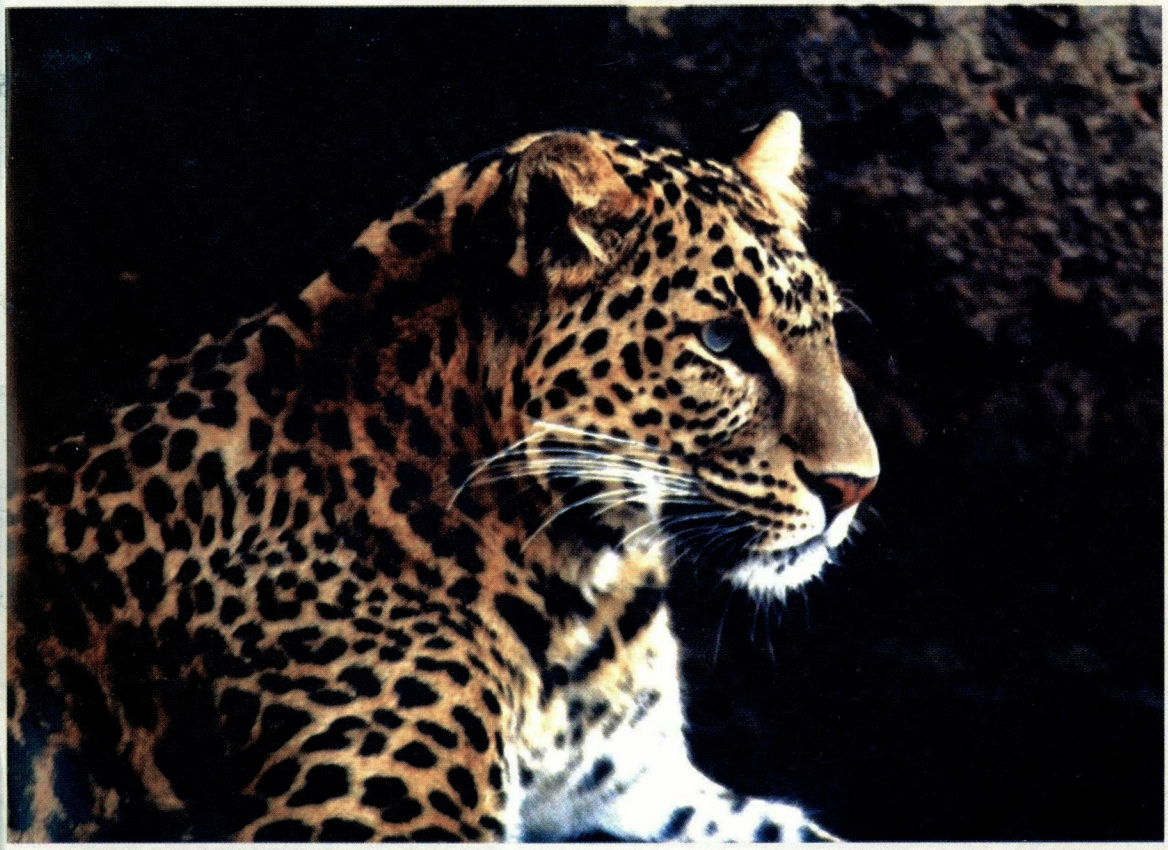

anther *(Panthera pandus)* Photo by : Rajeev Raj Mehta

A View of Bhagirathi river near Deoprayag Just after impoundment of Tehari Dam

Photo by A.S. Negi

Padam (*Prunus padns*) in flowering in the backdrop of a lush green high altitude forest of Garhwal Himalayas

Photo by A.S. Negi

Pride of Man

I think that I shall never see

A poem as lovely as a tree

A tree whose hungry mouth is pressed,

Against the earth's sweet flowering breast

A tree that looks at God all day

And lifts its leafy arms to pray,

A tree that may in summer wear

A nest of robins in her hair,

Upon whose bosom snow has lain

Who intimately lives with rain

Poems are made by fools like me,

But only God can make a tree.

Joyco Kilner

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Corrigendum

In the article " Conservation of some valuable medicinal and a matic plants in Uttarachal" by sri S.R. Katiyar which appeared in Cheetal Vol 44 No. 2 on pages 32 to 37, in table 1 of the article on pages 36 & 37 some mistakes have creaped in due to misadjustment of the table during typing which is highly regretted. The correct verson after serial no. 30 on page 36 is being corrected as under. This is again requested that a soft copy of artiles specially those of scientific nature with large tables & figure work, should positively be sent to avoide such misprints.

Table 1: Some important medicinal and aromatic plants are found in Uttaranchal

Herb	1 to 30 same as before				
*	31	*Hedychium spicatum, Ham.*	*Kapoor-kachari*	*Zingiberaceae*	*Root*
	32	*Houttuynia cordata, Thunb.*	*Dhap*	*Saururaceae*	*Whole plant*
	33	*Hyoscyamus niger, Linn.*	*Khursani*	*Solanaceae*	*Seed*
	34	*Hypericum perforatum, Linn.*	*ajwain*	*Apocynaceae*	*Whole plant*
*	35	*Jurinea dolomiaea, Boiss.*	*Basanti*	*Compositae*	*Root*
	36	*Justicia adhatoda, Linn.*	*Dhoop*	*Acanthaceae*	*Leaf*
	37	*Malaxis muscifera, Sm.*	*Vasa*	*Orchidaceae*	*Whole plant*
	38	*Megacarpaea polyandra, Benth.*	*Jeevak*	*Cruciferae*	*Root*
*	39	*Nardostachys grandiflora, DC.*	*Bamol*	*Valerianaceae*	*Rhizome*
	40	*Nicandra physaloides, Gaertn.*	*Jatamansi*	*Solanaceae*	*Leaf*
	41	*Paris polyphylla,*	*NA*	*Liliaceae*	*Root*
	42	*Sm.Phyllanthus niruri, Wall.*	*SatvaBhui Amla*	*Euphorbiaceae*	*Whole plant*
	43	*Picrorhiza kurrooa, Benth.*	*Kutki*	*Scrophulariaceae*	*Rhizome, Root*
*	44	*Pleurospermum angelicoides, Benth.*	*Lasora*	*Apiaceae*	*Root*
*	45	*Plumbago zeylanica, Linn.*	*Chitrak*	*Flumbaginaceae*	*Whole plant*
*	46	*Podophyllum hexandrum, Royle.*	*Ban Kakri*	*Berberidaceae*	*Root*
	47	*Polygonatum verticillatum, Allioni.*	*Maha-Meda*	*Liliaceae*	*Root*
	48	*Rheum australe, D. Don.*	*Archa Dolu*	*Polygonaceae*	*Root*
	49	*Selinum tenuifolium, Wall.*	*Bhutkeshi*	*Umbeliferae*	*Root*
	50	*Solanum xanthocarpum, Schrad.*	*Kathkari*	*Solanaceae*	*Seed*
*	51	*Swertia chirata, Ham.*	*Chiraita*	*Gentianaceae*	*Panchang*
*	52	*Tagetes minuta, Linn.*	*Vanphool*	*Asteraceae*	*Leaf, Flower*
	53	*Thalictrum foliolosum, Dc.*	*Mameri*	*Ranunculaceae*	*Root*
	54	*Valeriana jatamansi, Wall.*	*Sameva*	*Valerianaceae*	*Root*
	55	*Viola cancscens, Wall*	*Banapsa*	*Violaceae*	*Flower*
Climber	1	*Abrus precatorius, Linn.*	*Ratti*	*Fabaceae*	*Seed*
	2	*Celastrus paniculus, Wild*	*Mal-kandhani*	*Celastraceae*	*Stem*
	3	*Dioscorea deltoidea, Wall.*	*Gethi*	*Dioscoreaceae*	*Stem*
	4	*Mucuna prurita, Hook.*	*Kounch*	*Fabaceae*	*Seed*
	5	*Pueraria tuberosa, Dc.*	*Sirala*	*Fabaceae*	*Rhizome*
	6	*Rubia manjista, Roxb.*	*Majeti*	*Rosaceae*	*Leaf*
	7	*Tinospora malabarica, Miers.*	*Giloy*	*Menispermaceae*	*Stem*
	8	*Trichosanthes tricuspidata, Miq.*	*Indariyani*	*Cucurbitaceae*	*Fruit*
	9	*Vallaris solanacea, Kuntze.*	*Dudhibel*	*Apocynaceae*	*Leaf*

The author of the article is Mr. S.R. Katiyar, Department of Botany Govt. P.G. College, Gopeshwar, Chamoli - 246401 (Uttarakhand)

Acknowledgement

The Wildlife Preservation Society of India, Dehra Dun, acknowledges and puts on record its deep appreciation for WWF – India for their second installment of financial help of Rs. 50, 000 /- as support for publication of our quarterly journal 'Cheetal'. WWF – India's financial support for continuing the rediscovery of the mountain quail (*Ophrysis superculiosa*) with the support of WII and the Uttarakhand Forest Department is also deeply acknowledged for which a second installment of Rs. 50,000/- has been released by them. The deep interest and concern shown by Shri Ravi Singh, Secretary General & CEO, WWF-India in reviving the oldest organization of North India engaged in wildlife conservation and environmental issues has greatly been appreciated by all members of the Wildlife Preservation Society of India and its Executive Committee. We look forward for a continued support in future with assurance to put up our best in the field of wildlife conservation.

WWF – India is engaged in a multitude of activities for the protection and conservation of the environment in the Indian context. Climate change and energy conservation are among the chief areas of concern for the organization. The broad areas of focus are:(1) Climate Change(2) Education(3) Environmental Law(4) Forest & Biodiversity(5) Fresh Water & Wetlands(6) Conservation & Monitoring(7) Ocean & Coasts(8) Tiger & Wildlife etc.

WWF – India has a global presence in over 90 countries worldwide, with the coordinating body WWF – International, located at Gland, Switzerland. A specialist office in Brussels works on the policies and activities of the European Union, while a second office in Washington DC works with global institutions involved with international economic issues such as the World Bank. WWF – India is part of the WWF family with the Secretariat based in New Delhi. WWF – India is the largest organization engaged in wildlife and nature conservation in the country.

A. S. Negi

Readers View

Green Cottage,
Bala Hissar,
Mussourie.

June 6, 2007.

To,

The Editor,
'Cheetal',
Wildlife Preservation Society of India,
7, Astley Hall,
Dehra Dun.

Dear Sir,

I express my thanks to you for sending me the 'Cheetal', Vol. 44 April, 2007. My article "*Bagh Hamara Rashtriya Pashu*" published in the above magazine was written by me in order to convey to the younger generation of our country the importance of protecting the Tiger from the dangers it faces today, from the degrading and shrinking habitats and the poachers who kill this graceful animal for commercial benefits.

You will agree with me that the protection of our forests and our wild animals and birds dwelling there cannot be successfully achieved without the support and active participation of every citizen. It is my request to all the writers and wildlife lovers to write educative articles in Hindi so that more and more people benefit from such articles.

The article written by Lt. Gen. Jasbir Singh on the role of anglers in the preservation of sport fish in Uttarakhand rivers was very impressive. The dynamiting and poisoning of the river waters must stop. The villagers must play an active role for protection of the rivers so that they can benefit from this resource.

Yours Faithfully,
N. S. Negi.

The Vanishing Tiger

Govt. Steps fail to reign in poachers

*By Lt Gen (retd) Baljit Singh

The recorded history of faunal extinctions in India began in the latter half of the 19th century. The first to perish was the Himalayan mountain quail in 1876 followed by the pink-headed duck in 1935. Both birds were endemic to India and were driven to extinction by excessive hunting alone. The next to be exterminated was the Indian cheetah when the last two were claimed by a shikari in November 1947 in Madhya Pradesh.

The need of the hour is to create on war-footing a Federal Wildlife and Forest Service with statutory jurisdiction over all tiger habitats in the country and the staff who manage them

In the 19th century, the tiger remained comparatively safe because the Mughal Emperors had glamourised lion hunting as "The Sport of Kings." The feudatory chief-tains of India, the functionaries of the East India Company and later of the Crown were quick to ape the Mughals. As a result by 1890, it was believed that there were no more than 25 Asiatic lions left in India.

There never was a census of the tiger in India, or for that matter, of wildlife per se. It was for the first time in 1963 that E.P. Gee, a tea-planter from Assam and an eminent naturalist of India, provided a guesstimate that in 1900 AD there were perhaps 40,000 tigers in India.

This figure has since generally been accepted as a reasonable working hypothesis. Unfortunately for the tiger, 1900 AD was also the high-mark of the British Raj in India when shooting a tiger became a status symbol as much with the British as with the Indian nobility.

But for the fateful intervention by the two World Wars, the tiger in India might have been hunted to extinction in the first half of the 20th century. The stories of tiger hunting excesses are simply unbelieveable. There is this record of a tiger shoot organised over 10 days in 1903 (?) in the Indian terrai region when 32 tigers were shot. An identical number was shot the next year also and 14 the year after.

In Nepal, during the 11-day state visit in 1911 by Kind George V, 39 tigers were shot. And between 1933-40, guests of the Neplese Prime Minister dispatched another 433 tigers.

In 1950 Jim Corbett had opined that there were no more than 18,000 tigers surviving in India. Yet the tiger was to have no respite. The liberalised policy of possessing licenced firearms post-1947 proved so devastating that by 1963, E.P. Gee (by then a member of the Indian Board for Wildlife)

* House No. 219, Sector 16A, Chandigarh.

estimated no more than 4,000 tigers surviving in India.

At this point of dire-straits for the tiger's very existence there crops up the greatest enigma, that Mr. Nehru, who had put all his weight behind the survival of the Asiatic lion in India, should have had a blind-spot to the plight of the tiger ? He wrote a most scholarly and erudite foreward to EP Gee's book "Wildlife of India" published in 1960.

Mr. Nehru expounded : "Wildlife ?.... I wonder sometime what these animals and birds think of man and how they would describe him if they had the capacity to do so.... Inspite of our culture and civilisation in many ways man continues to be not only wild but more dangerous than any of the so-called wild animals... we must try to preserve whatever is left of our forests and the wildlife that inhabits them".

"Extremely well stated Mr. Prime Minister, but why did you betray the tiger". I ask in bewilderment.

Unlike many other countries, in India the leadership for the conservation of wildlife has always been provided by Prime Ministers. The creation of the Indian Board for Wildlife in 1952 was itself Mr. Nehru's brain-child.

It is quite likely that he was influenced to act decisively both by the extinction of the cheetah and the fear that the only surviving population of the Asiatic lion in the world confined to the Gir, was poised on the brink of extinction.

Indeed, he did save the lion as from 50 odd in 1952, today the Gir lions are 326. But there is no explaining Mr. Nehru's indifference to the tiger.

By 1970 the tiger numbers plumetted to no more than 1,800. The World Wide Fund for Conservation of Nature seized the opportunity to mount a global initiative to save the tiger.

By 1972 they created a corpus of $1 million to save the tiger and pleaded with Mrs. Indira Gandhi to take up the challenge. And so she did with her characteristic grace and steely determination.

To uphold National pride, Mrs. Gandhi spontaneously pledged an equivalent of $2 million to the corpus and thus was launched the Project Tiger in 1973.
Having accepted the chairmanship of the Project Tiger Steering Committee, Mrs. Gandhi directed that it should meet once a month. Her commitment to the tiger was so fierce that not a single monthly meeting was ever cancelled or postponed and she personally presided over each! Little wonder that by 1984, tiger numbers had revived to around 2,500.

Much was expected from Mr. Rajiv Gandhi. Regrettably, besides creating the Ministry of Environment and Forests and taking brief holidays in wildlife preserve, he provided no meaningful direction.

However, the momentum of Mrs.Gandhi's legacy, meanwhile, reached the zenith in 1988 when the tiger population crossed the 3,000 mark.

Just when the tiger seemed poised to shake free of the dark phase of 1930-60, the country entered the era of new political alignments characterised by frequent changes of Prime Ministers.

None of the six encumbents of the PMO who followed Mr.Rajiv Gandhi had either the inclination or the time for wildlife in general and for the tiger in particular.

The tiger which has a sheltered existence in national park tiger reserves between 1973 and 1988 grew less wary of man. Concurrently the exploiters of the free-market economy (particularly in SE Asia) targeted the elephant and the tiger as prime commodities for commerce.

While Veerappan and his gang accounted for over 600 tuskers for ivory, the tigers of India fared even worst ; they were besieged by a most sophisticated country-wide tiger poachers network.

Tiger poaching was accomplished with such practised ease and aplomb that for instance the Government was not even aware or feigned ignorance of it till in 2001 an international agency intercepted "31 tiger skins and 581 leopard skins etc." in Tibet from a single consignment from India destined for China. Sounds much like the sudden dawning of the reality of the presence of the Aksai-Chin road in 1950s.

We shall never know the truth whether the government was thoroughly inept or it misled the nation. However, the nation awoke to a rude shock in early 2005 when one fine morning the Tiger Reserve at Sariska was found cleared of all its 22 tigers!

The Prime Minister, Dr.Manmohan Singh, made a public commitment to the nation that he would never allow another "Sariska" and that he would save the tiger for posterity.

Rather than profit from wildlife management success stories prevalent elsewhere in the world, the Prime Minister's advisers have persuaded him to opt for a package of quick-fix remedies.

For instance, the Project Tiger Directorate will become a statutory body in the new garb of the National Tiger Conservation Authority (NTCA).

But this will be a meaningless cosmetic reform as the home-territories of the tiger and the people who manage them remain outside the jurisdiction of the NTCA.

Despite its statutory status, the NTCA has no mandate to impose compliance of its policies on the state. It will be a perfect setting to evade accountability at all levels as always.

The tiger cannot be saved by such half measures. The need of the hour is to create on a war-footing a Federal Wildlife and Forest Service (as for income tax) with statutory jurisdiction over all tiger habitats in the country and the staff who manage it. Failing that, the tiger may be exterminated from India by 2050, the latest.

While the ambers of "Sariska" have not been fully doused, there are reliable reports that the 2000 sq km Namdapha National Park and Tiger Reserve have lost all but one of its 61 tigers.

While the Field Director of the park and the Chief Wildlife Warden of Arunachal Pradesh have not denied these reports, they are busy circulating the alibi that 66 families of the Lisu Tribe from Myanmar had infiltrated surreptitiously and settled in three clusters inside the reserve in 1987.

The state governments are now ostensibly checking the ground reality and planning to resettle the tribal people outside the Park. Can there be a better example of locking the doors after your home has been ransacked?

If the Lisus had indeed been preying on the tiger since 1987, how come that the state governments were unaware? And how

come that the 2001-2002 census of 61 tigers shows an increase rather than a decline in the tiger population? Again, we shall never know the truth.

Dr. Manmohan Singh is destined to be marked by history as among India's greatest PMs. He had the genius and the drive to recast India's economy and to impart a renewed sense of purpose and pride to the nation as a whole.

Though not of his choosing, but in times to come Dr.Manmohan Singh's name will always be associated with either the survival of the tiger or its extermination from India. And if the tiger perishes in India, it will axiomatically perish altogether as a free-ranging mammal from the world.

And an extinction of a species is for ever. While the government moves at its own pace, the poachers have again stolen a march over it. For, there is fresh evidence that at least three more Tiger Reserves have been "Sariska-ed." And another four are close to being "Sariska-ed".

End of the road for the tiger? Even an avowed optimist will not find easy to utter a forthright "NO".

The writer is an eminent wildlife enthusiast.

This article first appeared in The Tribune, Chandigarh, Saturday, March 25, 2006.

For Whom the Bell Tolls

*T.S. Kunwar (Retd. Forst Ranger)

The dictum of "work is worship" can deliver goods only when it is executed after thorough observation of spheres of action of an organization and ground realities, which may have been responsible for its below standard performance and thereafter step-wise planning for ameliorating its lot by bearing in mind the main components, that of fellow workers.

Above foreword relates to Sri Narain Singh Negi, Retd. Forest Ranger. Sri Negi was first posted as Asst. Wild Life Warden in Corbett National Park, Dhikala, Ramnagar in 1962, who found out that some salient problems were the root cause of its malfunctioning. He then went through aforesaid analysis and it took him about three years for running the machinery on the right track to his way of thinking. Truly speaking he did a pioneering work by adopting trial and error method for upliftment of park management from scratch to peak by covering all aspects relating to it.

Incidentally I never met Sri Negi while on active service, though we had been contemporaries. My kinship with him dates back to our enrolment as ex-servicemen to the posts of foresters. I stepped into the department in 1946 after putting on 2½ years in the Air Force, whereas Sri Negi entered in 1952 after serving the Army for 8½ years. He retired from the department on Feb. 29th 1984 and myself on Apr. 30th 1985.

I used to hear a lot from higher-ups and colleagues as well about his proficient handling of day-to-day problems that were frequently encountered by the departmental field staff. This trait enabled him to steer the ship through deep seas in rough weather, thus raising administration to a peak. It is no gainsaying that his time-to-time reformatory suggestions were accepted by his considerate pragmatic bosses. In this respect I can not but make a special mention of Sri. D.N. Mishra, the retired Principal Chief Conservator of Forests, who was the Chief Wildlife Warden in 1964-65. He agreed in toto to Sri Negi's contemplated moves for betterment. It must have boosted his morale and zeal immensely.

I met Sri Negi for the first time in Mussorie some three years back at his Mussorie residence and learnt verbatim about the sorry state of affairs in Corbett Park and the difficulties he had to face in the initial years from 1962-1965 for taking work from staff under him. I found him very amiable, cordial, unassuming and warm-hearted person. I developed a deep respect for him. I had then decided to project his exemplary yeoman service for the appraisal of one and all. I have a sense of guilt for presenting it rather late.

Now I will be portraying the pivotal role played by Sri Negi in stages. As stated earlier he joined Corbett National Park, Dhikala in Feb. 1962 and observed that on account of following factors staff of Dhikala as a routine shifted to places like Ramnagar, Kalagadh and Chimtakhal after onset of Monsoon by the end of June.

1. Forest fair weather roads get blocked which resulted in loss of communication and

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cutting off the area from market and habitable zones.

2. There were no adequate provisions for lodging the staff in the Park area contrary to the fact that in the tourist season they used to live in tents.

3. The drinking water, which in fair season was uplifted through pumps and low power electric motor from adjoining Ramganga used to get turbid and muddy making it unpotable.

4. Wild elephants used to break the doors and windows at the Forest Rest House Dhikala every year. It necessitated shifting valuable articles and materials every year to Ramnagar after closure of the Park in June.

5. Malarial infestation was rampant during rains. Persons suffering from malaria had to bear it without proper medication. Evacuation of worst cases to hospitals or taking to doctor was unthought-of for want of any transport.

6. Repair to damaged Forest Rest House, bringing back of shifted material to Dhikala used to invariably delay the opening of the Park to tourists in November.

Closure of Park during rains went on as usual. Sri Negi concurred with the staff and it was decided that he along with three wild life guards/*chowkidaars* by turns would stay at Dhikala for a fortnight. The scheme was given shape in 1964 rains. Those relieved would be sent back to Ramnagar or elsewhere and then next three would join Sri Negi. The arrangement of sending and collection of rations and bringing the staff used to be done through elephant. While staying at Dhikala Sri Negi being a good angler used to trap fish daily and that was their regular feed. Sri Negi had to proceed on one and half months leave by mid of August 1964 to join his family members. He handed over charge to Wild Life Warden (WLW), Ramnagar requesting him to maintain the established routine. As ill luck would have it a fresher Wild Life Guard (WLG), hardly appointed two months ago fell severely ill with malaria and could not bear the trauma and committed suicide by shooting himself down with a government gun for want of timely medical attention and treatment.

The aforesaid incident was highlighted and criticized by the local newspaper. It drew the attention of departmental head as well. All this had a demoralizing affect on the field-staff, who were not at all prepared for staying at Dhikala during rains. By early 1965 Sri D.N. Mishra took over as Chief Wildlife Warden. He asked Sri Negi to suggest reformatory measures and what facilities should be provided to the staff for smooth functioning of the Park. Negi ji asked for mosquito nets, supply of enough chloroquine tablets (prophylactic), and first-aid kits to every member. Sri Mishra agreed to it in toto. It was also decided that one elephant would stay back in off-season for procuring rations and evacuating ill individuals to Ramnagar. However, the earlier stay of a fortnight was reduced to a week.

Sri Negi magnanimously volunteered for staying the entire rainy season at Dhikala. I was very impressed to learn about his comradeship. Two Wild life guards and a *chowkidaar* agreed to live with him, which could be possible on account of his compassionate nature.

Luckily none of the staff fell ill in 1965. Chief Wild Life Warden sanctioned a gang of eight *majdoors* for clearance of Park compound and maintenance of paths. Their services were also utilized for growing

vegetables. Sri Negi's daily angling in Ramganga substantiated their meals. Noticing community environment and fellowship in an out of way place like Dhikala two more WLGs opted for staying throughout 1966. Finally the entire staff of the Park started living there from 1967. In the meantime he was promoted to the post of Asst. Park Officer.

Thus under Sri Negi's competent leadership his team started working as a single cohesive unit and made rapid strides year after year. I attribute this to his fatherly figure and iconic image.

Corbett National Park was taken over by Project Tiger in 1973. Things started improving by leaps and bounds and it attained the distinction of one of the best parks of India.

I assume Sri Negi with his unparalleled devotion and dedication to official duties during his 17½ years stay in Dhikala, could have hardly managed to live with his family for more than 3 months in a year. I very much doubt whether he was able to pay required attention to his own progeny in their formative years.

I would like to put insight into his family life also. He hails from a hilly village lying in a remote area of Chamoli in Garhwal. His father was a humble farmer. He had his primary education near Gopeshwar and High School at Pauri in extreme adverse circumstances. Being the eldest of six brothers he enrolled himself as a Havildar Clerk in the Army at Lansdown immediately after appearing in High School in April 1943. Thus he became a wage-earner at a tender age of 17. He supported his younger brothers in their early schooling. He played a vital role once they crossed High School by way of encouragement and worthy guidance for carving their bright future. The beauty lies in the fact that he did it within his limited means. His earnest and Himalayan efforts bore fruits and two of his younger brothers – Sri N.S. Negi and Sri A.S. Negi qualified for Provincial Forest Service in the 1960s and rose to the rank of Principal Chief Conservator Forests.

His fraternal and mentor roles have been by far no less illustrious than his service career. Sri Narain Singh Negi is a stark example of a self made man rising from a grass root level and making a phenomenal contribution to wild life society as a whole. It is a sheer joy that he is still delivering lectures on wild life and its management.

I conclude this tributary article on colleague who literally acted as a torch bearer. Hats off to dynamism of a multifaceted personality. I wish for his good health and peaceful life ahead.

PIG STICKING and THE KHADAR CUP

(In memory of Late Brig. R.P. Singh. A fine horseman and a loving uncle)

*Dr. Prashant Singh

Amongst all the animals in the Indian jungle the three with the greatest character are undoubtedly the Tiger, the Tusker (a male elephant) and the smaller tusker (a full grown male wild boar). One of the legacies of the British Raj, which was followed on till much later, by the Indian Army ; was a game called "Pig Sticking". I doubt whether they still play it today, but as a young boy of fourteen I once had a chance to attend what was called the "Khadar Cup".

My uncle Brig. R.P. Singh was commanding the Remount and Veterinary Corps. Center and School in Meerut, when one day he came to Doon to pick me up for the event. It came as a pleasant surprise and I packed my bags to leave for what turned out to be a truly enjoyable holiday. As a small child I had attended a few hunts and duck shoots but my uncle had promised this would be something very difficult.

We reached Meerut and spent a couple of days lazing around. On the other hand Brig. R.P. was busy from morning to evening organizing the event. The guests had started coming in. There were officers from the 61st Cav., Armoured Corps, two British officers and one from the Mounted Police. All of them shared the same passion – Horses. What followed were welcome parties, cocktails and dinners in typical "Fauji" style and numerous "pig sticking" stories.

There was lots of excitement all around and everyone was eagerly waiting for the event to start. Finally one afternoon we were all asked to board our vehicles and our convoy, including army jeeps, jongas, trucks and a bus (for ladies and children) started for the camp.

The camp was on the banks of river, about an hours drive from the city. Tents had been put up for accommodation. We had our evening tea and went for a short walk. The place was dry and sandy with tall elephant grass growing all around. "Perfect place for the wild boar to hide." My uncle told me.

Dinner was served early and to the disappointment of many officers, the bar was kept closed. "Everyone has to get up early tomorrow, including ladies and children". Brig. R.P. announced. "6 a.m. we leave the place. Those who fail to get up will be left behind".

The next morning we were woken up by the call of the bugle. I rushed to the make-shift toilet (which was in a smaller tent) and was ready in half an hour, well in time to have a glass of milk and toast.

At 5:30 a.m. another bugle was sounded and soon the horse were brought into the camp. Beautiful big horses (all above 15 hands in height) harnessed and ready. Brig. R.P. was the first to mount followed by the other officers and men. Special care had been taken to give the British officers "decent" horses so that they go back to their country in "one piece" and don't land up with broken bones during the event.

* Medical Officer (Dental) ONGC Hospital, Dehradun.

Two elephants and two camels were also there for the ladies and children. While the ladies preferred the comfort of the elephants I decided to take the camel. We left exactly at 6 a.m. and in a short while reached a place from where the river had to be crossed. The sight of a hundred horsemen, two elephants and two camels crossing the river with the sun rising in the east was truly spectacular.

We reached the other side and saw a vast open dry grassland which appeared to be endless. The horsemen collected in smaller groups of six to seven. At this point they were handed their spears. The spears were bamboo shafts 6 to 8 feet long with sharp metallic tips. A "hawaldar" on his mount trotted in to give the basic instructions as to how to use the spears. The demonstration was over in five minutes. As the "hawaldar" moved away my uncle came in on his horse. All the horsemen collected around him in a semi circle.

"Good luck to all my fellow officers and men". Brig. R.P. said raising his spear in the air. "Let the game begin." He turned his horse to the other side. Slowly lowering his spear forwards, till it was parallel to the ground, he gave a light kick to his horse and shouted "CHAAAARGE".

In a few minutes they were gone. Galloping away into the horizon. All that was left behind was dust.

After the dust had settled down one of the mahouts smiled and said "So much 'tamasha' for a little pig" My aunt sitting on his elephant immediately checked him and explained that the event was more of a tradition rather than a pig hunt. Playing the game together the officer and his men developed an informal and friendly relationship with each other. This relationship would go a long way in the event of war. "The more you sweat in peace, the less you bleed in war". She concluded.

The rest of the morning was spent in going to the spot where lunch was to be served. On the way I spotted a herd of black buck, a couple of chinkaras and a neelgai but surprisingly no pigs. I felt sorry for all horsemen who were out looking for pigs. I was told that many a times the men come back empty handed and the Khadar Cup goes back into the locker.

By now the sun was on our heads and it was rather hot. We reached place and while the ladies helped with the cooking, the children loitered around in the shade of the Shamiana.

The basic rule of "pig sticking" is simple. Go out on your horse armed with a spear and try to hunt a wild boar. The person who draws first blood is the winner. Although it may sound easy, yet it is indeed a tough game. You have to be patient,, stronghearted, alert, fast acting and above all an excellent horseman. It is the true test of a cavalry man. Those of you who have seen a boar run will know exactly what I am talking about. Galloping across the plains at full speed, with the reins in one hand and the spear in the other, many men have had nasty falls and terrible injuries during the wild boar chase. There have also been times when an injured tusker has turned around and charged at the horseman and his steed with devastating results.

At about 1 p.m. we saw a dust storm moving towards us. On closer look it turned out to be our riders back from the "hunt". Everyone clapped and cheered to welcome their return. The sounding of the bugle once again, indicated that the game was now over.

People had gathered from far and wide for an event which took place only once a year and was now over in seven hours.

As the horsemen dismounted I rushed to my uncle and asked "Did you see any wild boar."

"Yes. Two". My uncle said. "and we got them both" he continued with smile. This year the Khadar Cup would not be locked up. It would go to someone. To whom, would be announced shortly.

The first pig which was brought in was speared by a young captain. He was our first contestant for the cup. As he was bragging about the kill and telling us his story we suddenly saw his smile vanish and his face change colour. We looked in the direction he was looking and saw a big boar (three times the size of the first one) being carried in by four men. It had long tusks and looked fearsome. We knew now that the winner was the person who had speared this boar. In a rare event when two or more boars are killed the cup goes to the person who has killed the heavier boar. Our new hero was an unassuming, thin, tall sepoy.

Brig. R.P. came over for a closer look and said "Captain, you've speared a squeaker. I am sorry but the winner of the Khadar this year is the sepoy. Better luck next time."
We all finished the lunch and then started our journey back to the camp. On reaching the river the horsemen removed the saddles from their horses and jumped into the water. Both riders and their mounts enjoyed their cold, fresh water bath after a long, hot and tiring day.

In the evening the awards were given away. The Khadar Cup (a large silver trophy with a wild boar carved on top) went to the sepoy. All the others got souvenirs, books and plaques to remind them of the lovely time they had spent in the wilderness – far away from city life.

The event had been a grand success and I came back to Doon with beautiful memories and a bag full of "pig sticking" stories.

Correcting historical injustices – at the expense of future generation ?

*H.S. Gupta,

We, the human species, hold the natural environment of our planet in common with all members of our species : past generations, the present generation, and future generations. As members of the present generation, we hold the Earth in trust for future generations. At the same time, we are beneficiaries entitled to use and benefit from it (Weiss, E.B, In Fairness to Future generation).

This is what Nobel Peace Laureate Ms Rigoberta Manchu of Guatemala and of Mayan descent says :

The Mayans, our grandparents, always said, every human being occupies a small piece of Time. Time itself is much longer, and because of this they always said that we must care for the earth while we are on it because it will be a part of our children, and of our grand children. They know that life is short, that it can end soon, and if that one gets lost on the way, others will come to take their place.

It is only when the last tree has been cut.
When the last fish has been caught,
When the last river has been poisoned,
That you will realise that you cannot eat money.

- A poem of a native Indian tribe in North America.

[Long before the white man set foot on American soil, the American Indians, or rather the Native Americans, had been living in America. They adored and respected nature. When the Europeans came there, there were probably about 10 million Indians populating America north of present-day Mexico. It is believed that the first Native Americans arrived during the last ice-age, approximately 20,000 – 30,000 years ago. The oldest documented Indian cultures in North America dates back to 15000 BC.]

Until recently the Indian have identified strongly themselves with the *Aranya Sanskriti* – the Forest Civilisation. According to Rabindranath Tagore**

The distinctiveness of Indian culture consists of its having defined life in the forest as the highest form of cultural evolution. In '*Tapovan*', he writes : "Contemporary western civilization is built of brick and wood. It is rooted in the city. But Indian civilization has been distinctive in locating its source of regeneration, material and intellectual, in the forest, not the city. India's best ideas have come where man was in communion with trees and rivers and lakes, away from the crowds. The peace of the forest has helped the intellectual evolution of man. The culture of the forest has fuelled the culture of Indian society. The culture that has

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**The great poet and philosopher of modern day India

arisen from the forest has been influenced by the diverse processes of renewal of life, which are always at play in the forest varying from species to species, from season to season, in sight and sound and smell. The unifying principle of life is diversity, of democratic pluralism, thus became the principle of Indian civilization. Not being caged in brick, wood and iron, Indian thinkers were surrounded by and linked to the life of the forest. The living forest was for them their shelter, their source and food. The intimate relationship between human life and living nature became the source of knowledge. Nature was not dead and inert in this knowledge system. The experience of life in the forest made it adequately clear that living nature was the source of light and air, of food and water.

So it is quite logical that very few people in that country would tend to disagree that forest are for the good of society. The spectrum of benefits (both in goods and services) that one gets from the forests is very large. But they, in general, have very long time frame ; and it affects very large geographical area and have ramification of diverse livelihood.

Despite the forests "beneficence", and the majority surviving / thriving on forest goods and services ; there is a vested interest group determined on destroying this "Natural Capital" for converting into the agriculture. The root cause is humancentric approach, which make us think that all goods and services of earth are meant to be enjoyed by humans at the expense of all other creature. This is despite the fact, it is neither sustainable nor in the long term interest of other flora, fauna or other natural resources or even the mankind. The markets, behavioral norms, regulations and incentives determine the mix of forest and non-forest in a region (Mayers, 1999). And it is logical that with increased land prices ; tendency of elite to grab the easy property, weak enforcement of regulations and disguised (even over) encouragement by the political leaders have found the easiest way of converting the "common property resources" like forest into "private one". Such interest group are growing more and more powerful, undermining the overall public interest or the needs of the disadvantaged group ; because other stakeholders are unable to visualize the harms immediately and their protest is too mild.

Hence, Govts., civil society groups and far sighted private sector interests must look for answers to tackling the policy causes of such a rampant decimation of forests. Though, policy is a political business, and politicians do not listen, so researchers renaming, "what works" won't improve anything (Mayers 1999). After independence, India was not having adequate production of foodgrains and witnessed severe famine in mid-sixties. During "Grow More Food Campaign", large forest areas were diverted for the agricultural production. Initially, the rich forest areas having deep soils, situated in valleys were destroyed to augment agricultural production but later even poor, slopy, unproductive soil of forested areas were not spared from the plows of encroachers. Unfortunately, certain self seeking political parties, lobbies and NGOs have been encouraging such encroachments on forest land to increase their voter base / influence, with helpless foresters just acting as mute spectators. When the law of land is applied, the foresters are termed as villains – "torturing poor and weaker sections of the society". But people fail to recognize that "forest" is a common property resource and the forester is not an alien creature but simply acting as "trustee", managing the same on behalf of people and for the

people (enforcing the policies, laws and regulations formulated by democratic elected representatives of people only).

The situation has gone so bad that there is a common perception amongst foresters that the fate of forest is determined by forces beyond their control. Whilst this, to varying extents, may be true. The fatalism which it engenders needs to be overcome. In the face of these extra-sectoral influences, foresters are inclined to retreat into their shells and encourage the illusion of stability : as the determining forces are beyond control, it is appropriate to ignore them. But these extra sectoral influences are to be treated as temporary aberrations from which the forest must be protected. (Mayers, 1999). Romm (1985) noted that this must result in a recurring tendency to focus on the "best" way to treat the forest ecologically, technically and economically – and to generate policies which are not 'merely normative statements of purpose that seem inevitably thwarted by society's possibly malicious refusal to stand still'.

Box -1

The tiger is suffering from a lot of habitat loss. The Indian Parliament is considering a bill that would give each family living in forest areas several hectares of land of their own – the Draft Tribal Bill 2005 (See Sanctuary Asia Vol. XXV No. 4). That land would then become private rather than forest land. That will be the end of most tiger habitat because the government will lose control over the forest. The threat to habitat is very important in India.
Dr. George Schaller
Vice President
Science and Exploration Programme
Wildlife Conservation Society

If we look the controversy of allotting the forest to encroachers, squatters, in the name of correcting the historical injustices – it would appear, how short sighted we are. We have seen how such follies, committed in other countries are realized now and yet some political leaders, activists in India are determined to commit the same mistake. (see Box 1 and 2) Alas, there will not be these protagonists of "correcting historic injustice" to observe the ill effects of these misdeeds – heaped on not only to those "tribal brethrens", but the whole humanity. It is high time the good sense prevails to our policy makers ; who must realize the importance of "public trust" for the CPR like forest. The public trust doctrine refers to the duty of sovereign states to hold and preserve for the general benefit of citizens at large. The public trust imposes upon the government an "affirmative obligation to protect resources. (Seth 1993) At the most basic level," "the public trust doctrine holds that government must act as a fiduciary in its management of the resources which contribute the corpus of trust". And the Govt. is also

expected to protect the interest of other creatures, like animals and birds – which will perish ; if the forest lands are allowed to be usurped in the name of "correcting historic injustice".

Box -2

THE TRIBAL BILL

As someone who has spent years working with Aboriginal Australians, it is with great sadness that I watch the unfolding of the Tribal Bill in India. Such measures have been tried in Australia and comprehensively failed. Aborigines now hold rights to more than 15 per cent of Australian lad mass yet earn next to nothing. The granting of assets did not come with the transfer of knowledge and skills needed to sustainably use them. What we in Australia failed to recognize is that **land is neither a means nor an end in itself for today's indigenous peoples.**

The Australian experience stands as a dire warning to all who care about the long-term ecological health of India's forests and wildlife, and most importantly to the Indian *adivasis* themselves. Our experience says this : transfer of land by itself neither leads to a re-attainment of lost culture nor economic gains. Quite the opposite has occurred. Aboriginal leaders say what their people really need is education and jobs – transfer of land plays no role in this.

Coming to this understanding has cost Australia dearly. The Australian people and Government have wasted tens of billions of dollars trying to rectify the disastrous historical treatment of Aborigines, through monetary handouts and granting of land rights. The aim has been justice and economic development. Our hope was that today's Aboriginal people would somehow miraculously return to their ancient way of life, while enjoying modern health and service benefits. These policies have failed, and made matters worse. Aboriginal development indicators have steadily declined – male life expectancy in some communities has fallen to 55.

The lessons are clear – simply reversing a past wrong is not always the best way to achieve justice. In India, the starting position should be to understand what the *adivasis* want today, rather than what others think the need from yesterday. My bet is that like all people, they want secure livelihoods and better opportunities for their children. The 'Tribal Bill' will achieve none of this. This short-sighted measure will promote the permanent desecration of the land through mass deforestation, for a temporary cash injection. Lack of land is no longer the real concern facing *adivasis* ; giving it back is certainly not part of the solution !

In Australia, we are waking up to our problematic policies Aboriginal leaders are calling for an end to Government handouts and are working with the business sector to build sustainable enterprises. I hope that India can learn from our costly mistakes. If not, I fear that the decades of injustice heaped on the *adivasis* will mount.

Contributed by a former Deputy Director of the Cape York Institute, an Aboriginal-led organization that advises the Australian Government on Aboriginal Policy.
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These evolving legal principles, do conflict with values and interests in the value of protection of the environment in the interest of all, versus production (industrial and otherwise)

for the good of all, (Lokur 1999). But if any "law" is relied for regulating the natural resources without seeking the cooperation of the "users" of these resources, this will not be in consonance with democratic ethics. Hence the best course would be to not to encourage self destructing practices for natural resources – but to look at them for long term sustenance of the society.

The principles of intergenerational equity as enunciated by (UNU) are

1. Conservation of Options : must conserve diversity to prevent limiting future generations
2. Conservation of Quality : must conserve quality of those resources
3. Conservation of Access : must preserve "rights of access to the legacy of past generations and should conserve this access for future generations"

These principles justify the CPRs like forest to be conserved for future generations. The forest ecosystems being so complex, the "Preservationist Model" as suggested in UNU approaches seems to be appropriate in the present context. By following the "Intergenerational Equity" principle, considerations adopting Environmental protection, socio-economic development etc. can be achieved as the natural resources like forest are in inter-temporal context. These principles have been internationally agreed and ratified by different countries – over the years, some of which are shown in Box 3. The relevant case law of different countries, also offer light on this debate.**

**** Case Law on intergenerational Equity**

ICJ : Judge Weeramantry
Greenland and Jan Mayenl (Denmark V. Norway) 1988.
Fishing area dispute
Nuclear Tests (New Zealand v. France) 1995

"The case before the course raises, as no case before the court has done, the principle of intergenerational equity – an important and rapidly developing principle of contemporary environmental law... [The case].... raises in pointed from the possibility of damage to generations yet unborn."

Domestic Case Law
"for the benefit of future generations"
1993 Philippine Supreme Court, Minors Oposa v. DENR
Children represented future generations in class action suit to halt timber cutting in national forests
(Relatively important internationally Somewhat ignored in Philippines)

Box -3

Some of the source of inter-generation equity principles are :

Hard Sources

UNFCCC (article 3): " Parties should protect the climate system for the benefit of present and future generations of human kind, on the basis of equity and in accordance with their common but differentiated responsibilities".
Convention on Biological Diversity - 1992 : Principle 10 (38)

Soft Sources
Stockholm : "To defend and improve the human environment for present and future generations has become an imperative goal..." and "The natural resources of the earth... must be safeguarded for the benefit of present and future generations".

Rio : Principle 3 "The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations."
(//www.unu.edu/unupress/unupbooks/uu25ee/uu25eek0z.htm)

If we look at these principles –
The preservation for the future is very important concern and is supported by the Customary law, for a very long period of time. This has rootings in religious, cultural and legal traditions also. It also ties together environmental and socio-economic issues.

But when future preservation prevents intragenerational equity, it is difficult to enforce. As future generations can't sue the offending party today.

At the same time intergenerational Equity brings together many aspects : like – Environmental protection, Resource utilization, Socio-economic development. Human rights etc. Some of the long term implications are

- Tropical-forest destruction sufficient to diminish significantly the overall diversity of species in the region and the sustainability of soils
- Air pollution or land transformations induce significant climate change on a large scale

(source//www.unu.edu/unupress/unupbooks/uu25ee/uu25ee0z.htm)

But these well established principle are being bypassed in the current political environment ; though almost every aspect of forestry is a political activity, and the type of forestry which dominates in a country presupposes a political direction to development. But to declaim a

"lack of political will" is generally to duck the responsibility, which foresters' considerable powers give them. Forestry can and should be an activity which changes the political environment for the better, like any other activity. (Mayers, 1999)

The forest cannot remain mute "spectator", to all the abuses heaped on them by the humans (be it tribes, non tribes, developed, undeveloped or any classification of human being). The 'founding father' of US forestry, Gifford Pinchot, used to urge foresters to be technical and stay out of political debate, he was eventually sacked for political reasons! Whereas another forester, Jack Westoby, on the other hand, made calls from the early 1980s onwards for foresters to speak out on issues of access to land, participation and social justice- (Mayers, 1999). So, when the polity is moving towards multicreature centric ; the "humans" have to take a more responsible and proactive role and "concern"**** towards "mankind"***. This is highly desirable and expected from the we humans (considering our intelligence and knowledge gained over the year) to think more for the welfare of the every stakeholder of the earth-as it will be in the interest of mankind – and its successive generations also.

***the word "mankind" implies a link with the human rights framework and with the long-term temporal dimensions, including the inclusion of future generations :

****the word "concern" emphasizes the preventive character of environmental protection as well as the consequential effects or responses called for.

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कालीदास के काव्यों में कीट–विज्ञान (ऐन्टोमोलाजी इन दि लिट्रेचर आफ कालीदास)

*शिवप्रसाद,

सारांश

महाकवि कालीदास की रचनाओं से विश्वास किया जाता है कि कविवर का जीव–विज्ञान/जन्तु विज्ञान/कीट विज्ञान संबंधी वृहद योगदान रहा। उनमें प्रकृति के अध्ययन की अपार क्षमता थी। इससे यह निष्कर्ष निकलता है कि यदि उनकी महान रचनाओं की गूढ़ता एवं वैज्ञानिक विचारों का गहन अध्ययन किया जाये तो कुछ और उपयोगी अध्याय जीव–विज्ञान के इतिहास/कीट–विज्ञान में प्रवेश पा सकते हैं।

उनकी रचनाओं से विदित होता है कि कविवर एक असाधारण प्रकृति के अन्वेषक एवं कीट विज्ञानी थे। इस बात की भी पुष्टि होती है कि शायद वे ही विश्व के एक मात्र प्रथम भारतीय कीट–विज्ञानी थे।

परिचय

यदि कोई वैज्ञानिक कवि–हृदय भी रखता हो तो कोई विस्मय की बात नहीं, क्योंकि प्रत्येक मानव सर्वप्रथम एक प्राकृतिक जीव है उसके पश्चात् कुछ और। परन्तु यदि कोई कवि–हृदय व्यक्ति एक परिष्कृत वैज्ञानिक होने का परिचय भी अपने काव्यों में दे तो उसे आप एक चमत्कारी व्यक्ति मानेगें।

ऐसा ही कुछ महाकवि कालीदास के महान 7–काव्य–कृतियों के अध्ययन से ज्ञात होता है। महाकवि ने अपनी काव्य संरचनाओं में प्रकृति एवं पर्यावरण को चोली दामन का साथ कहा। उनकी महान कृतियों का अध्ययन करके यह विश्वास पूर्वक कहा जा सकता है कि प्राचीन भारत में भी प्रकृति एवं पर्यावरण के अन्तर्गत अन्य विज्ञानों के अलावा जीव विज्ञान/प्राणि विज्ञान/कीट विज्ञान वनस्पति विज्ञान जैसे विषयों पर महाकवि कालीदास का अधिकार एवं योगदान रहा।

सद्यपी महाकवि कालीदास के जन्म स्थल एवं सही काल के संबंध में अनेकों भ्रांतियाँ है। फिर भी वर्ष 1991 के अक्टूबर/नवम्बर माह में गढ़वाल विश्वविद्यालय (श्रीनगर गढ़वाल) के संस्कृत, हिन्दी एवं पुरातत्व (आर्कयोलोजीकल हिस्ट्री) इतिहास के विभागों ने उनका जन्म–स्थल उत्तराखण्ड के जनपद – चमोली गढ़वाल में ऊखीमठ/केदारनाथ मार्ग में ग्राम कविल्ठा (कालीमठ) उत्तराखंड बताया तथा वहाँ पर उनकी जन्म शताब्दी भी मनाई।

भूतपूर्व वैज्ञानिक एस0डी0 भारतीय वन अनुसंधान एवं शिक्षा परिषद, निवास 77 झन्डा मोहल्ला देहरादून

प्रस्तावना

यों तो प्राचीन भारत की पुण्य धरा पर अनेकों महान ज्योतिष्ज्ञ, गणितज्ञ एवं भौतिज्ञ तथा रसायनज्ञ अवतरित हुये परन्तु किसी भी ज्ञात विज्ञानी का उल्लेख नहीं मिलता (मनी, 1955, नोरडेन्स की ओल्ड, 1929, 1933)। इसका एक कारण यह भी हो सकता है कि जीवों एवं वनस्पतियों के संबंध में जो भी रचनायें पौराणिक काल में लिखी गई होंगी उनका लेखन माध्यम परिष्कृत संस्कृत भाषा रहा हो। तथा उसका अध्ययन इस क्षेत्र से संबंधित ज्ञान के लिये किया गया हो। हुसैन (1938), मजूमदार, (1953) एवं बोहरा (1938, 1950, 1951) के प्राचीन संस्कृत ग्रन्थों के गहन अध्ययन के फलस्वरूप ही कीटों के बारें में यह ज्ञात प्रकाशित हुआ। हमारी पौराणिक भाषा संस्कृत में रचे ग्रन्थों/काव्यों इत्यादि में, इस ज्ञान के बारे में अनादि काल से देश की महान विभूतियों के चिंतन, मनन एवं लेखन का विषय रही होंगी, जिसके फलस्वरूप ही आज हम कुछ जान सके।

जैसा कि महाकवि कालीदास रचित काव्य के संदर्भ – रघुवंश, 6–69 "श्लोक तं प्राप्य, षट्पदावली" से विदित होता है कि वे ही एक मात्र 200 वी0सी0 (415 ए0डी0) के प्रथम जीव विज्ञानी/कीट विज्ञानी हुये जिन्होंने कीट जंतु को षटपदा (छः पैर वाला) जन्तु कह कर परिभाषित किया तथा अन्य प्राणियों से उसकी अलग से पहिचान बताई जो कि कीटों की एक मात्र संक्षिप्त एवं परिमार्जित परिभाषा देती है तथा यह परिभाषा किसी भी अन्य जीव पर अवतरित नहीं होती। यह परिभाषा उनके प्रखर एवं कुशाग्र जीव विज्ञानी/कीट विज्ञानी होने का परिचय देती है।

इसी परिभाषा (षटपादा) को महान जीव विज्ञानी/कीट विज्ञानी लेट रिले0 ने भी 1825 ए0डी0 में कीटों को हेक्सा–पोडा (सिक्स लेग्ड) कहकर परिभाषित किया, और तब से अब तक वर्ग–कीट (क्लास–इनसेक्टा) की यह अकाट्य एवं सबसे मान्य तथा एक मात्र व संक्षिप्त परिभाषा मानी गई जो कि कीटों को प्राणि जगत से इस गुण के कारण सबसे अलग पहिचान का गुण/चरित्र (कैरेक्टर) दर्शाती है।

उपरोक्त उदाहरण से स्पष्ट होता है कि महाकवि का सम्पूर्ण जीवन अरण्यों (जंगलों) में रहकर प्रकृति/पर्यावरण के अध्ययन में लीन रहा। उन्होंने भारत की ऋतुओं, प्रकृति/पर्यावरण, जीव विज्ञान, प्राणि विज्ञान, वनस्पति विज्ञान व प्रत्येक भूखण्डों का भौगोलिक वर्णन अपनी प्रखर बुद्धि से किया तथा उनके परिवर्तनों एवं प्रभावों को उल्लेखित किया।

कीट विज्ञान संबंधी ज्ञान का परिचय उनकी सात महान कृतियों यथा –

1. मालविका ज्ञान मित्रम 2. विक्रमोर्वशीय 3. अभिज्ञान शाकुन्तलम 4. कुमार संभव 5. रघुवंश 6. ऋतुश्रंगार 7. मेघदूत (पूर्वा एवं उत्तरा) के विभिन्न खण्डों में मिलता है।

यही नहीं उन्होंने अपने उपरोक्त रचनाओं में कीटों की भिन्न–भिन्न प्रकार की 18 प्रजातियों की 50 श्लोकों से भी अधिक में प्रयुक्त किया। साथ ही इन कीटों को उनसे संबंधित पौधों एवं स्थलों को भी उजागर किया जो कि उनके वितरण एवं स्वभावों तथा अन्य कार्य कलापों को भी वर्णित करते हैं जैसे :–

1. वितरण 2. बाह्य–आकार 3. वास स्थान 4. स्वभाव 5. गतिविधि 6. गन्ध ज्ञान 7. स्वाद ज्ञान 8. रंग ज्ञान 9. प्रकाश ज्ञान 10. वर्षा एवं तापक्रम परिवर्तन पर प्रतिक्रिया 11. रंग भेद एवं छद्म क्षमता 12. ध्वनि का उत्पादन 13. चमक पैदा करना 14. पेड़ पौधों के साथ उनका सामंजस्य 15. मौसमी जीवन 16. संभोग प्रक्रिया में युग्म बनाना 17. वल्मिक शिखरों का निर्माण (टरमिटेरिया) 18. वल्मिक पर आश्रित कीटों व प्राणियों की जानकारी (टरमिटो फिलस) तथा पारस्थितिकी (इकालॉजी) इत्यादि।

यही नहीं अपितु कीटों का आर्थिक महत्व जैसे पहलू को भी भली भांति दर्शाया जैसे :– 1. कीटों द्वारा पुष्पों का परागण 2. मधुमक्खी द्वारा शहद का निर्माण 3. लक्ष–कीट द्वारा लाख का निर्माण 4. रेशम कीट द्वारा रेशम का निर्माण 5. विषैले कीटों द्वारा मानव एवं जानवरों पर दंश का प्रभाव 6. टिडिड्यों द्वारा हानि, इत्यादि। उन्होंने अरण्यों तथा वनस्पतियों का भी उल्लेख किया जैसे – 1. पंकज 2. पदम 3. अरविन्द 4. सहस्त्र पत्रा 5. अम्बुज 6. कमल 7. मल्लिका 8. कुँदा 9. आम्र 10. कोबिद्रा (मालझन) 11. तिलक (तुलसी) 12. कुसुम 13. कुसीसाया 14. बरीसहा (कमल की प्रकार) 15. कटनीकाश (गुड़हल) 16. कुसेसाया (कमल की प्रकार) 17. बेरीरूहा (कमल की प्रकार) 18. अशोक वृक्ष 19. प्रियंगू (एक प्रकार की लता बेल) 20. नलनी 21. उपटाला (कमल की प्रकार) 22. चमेली 23. सलाई वृक्ष 24. करनीकाश 25. पुनंगा 26. नाग केशर 27. खजूर इत्यादि।

कालीदास के प्रकृति चित्रण में आध्यात्मिक सौंदर्य

महाकवि ने अपने काव्यों में किस प्रकार क्रमशः प्रकृति के मार्मिक एवं हृदय स्पर्शी प्रभाव को चित्रित किया था यह समझने के लिये उनकी कृतियों का तुलनात्मक अध्ययन करना अति आवश्यक है जिसके लिये संस्कृत के महान ज्ञानियों की आवश्यकता होगी जो कि प्राचीन/पुरातन संस्कृत साहित्य के अच्छे जानकार भी हों, ताकि इनके काव्य का अध्ययन करके जनसाधारण की भाषा में अनुवाद कर सकें तथा जीव विज्ञान के इतिहास (हिस्ट्री आफ बाइलौजी) की संरचना में एक नये अध्याय का समावेश करा सकें।

1. आलि

1. उपचिताद्यवा शृचिभिः कणेर लिकद्म्बकयोगमुपेयुषी।
   सघ्शकान्तिरलदयत मंजरी तिलकमालकजालकमौक्तिकैः।। रघुवंश – 9–44
2. 'ध्वजपटं मद्स्य धनुर्भष्तश्छविकर' मुखचूणेमष्तुश्रियः।
   कुसुमकेसररेणुमलिव्रजाः सपवनोापवनोत्यितमंन्वयुः।। रघुवंश – 9–45
3. श्रय मदगुरुपक्षौलोकपलद्विपानामनुगतम लिवष्न्दैगण्ड मित्तीर्विहाय।
   उपनतमणि बन्धे मूर्घिन पौलस्त्यशत्रोः सुरभि सुरविमुक्तं पुष्पवप पपात।। रघुवंश – 12–102
4. श्रलिपंक्तिरनेकशस्त्वया गुणकष्त्ये धनुषो नियोजिता।
   विरुतैः करुणस्वनैरियं गुरुशोकामनुरोदिनीव माम्।। कुमारसंभव – 4 – 15
5. रम्यः प्रदोपसमयः स्फुटचन्द्रमासः पुंस्कोकिलस्य विरुतं पवनः सुगन्धिः।
   मत्तालियूथ विरुते निशि सीधुपानं सर्व रसायनमिदं कुसुमायुधस्य।। ऋतुश्रष्गार – 6 – 35
6. आम्री मंजुलमंजरी वरशरः सत्किंशुकं युद्धनुर्ज्या यस्यालिकुलं कलंकरहित छत्र

शितांशुः सितम्।

मनेमो मलयानिलः परभष्ता यद्वन्दिनो लोकजित्सोऽयं वो वितरीतरीनु वितनुमद्रं वसन्तान्वितः।।

ऋतुश्रृंगार – 6 – 38

2. भ्रमर

7. दिनेषु गच्छत्सु नितान्तपीवरं तदीयमानीलमुखं स्तनदयम्।
तिरश्वकार भ्रमरामिलीनयोः सुजातयोः पंकजकोशयोः श्रियम्।। रघुवंश – 3 – 8

8. अथोपरिष्टाद्भ्रमरैभ्रमद्भिः प्रावसुचितान्तः सलिलप्रवेशः।
निधौंतदानामलगण्ड मित्तिर्वन्यः सरित्तो गज उन्ममज्ज।। रघुवंश – 5 – 43

9. तद्वल्गुना युगपदुन्मिषि तेन तावत्सद्यः परस्परतुलामधिरोहतां द्वे।
प्रस्पन्द्मानपरुषेतरतारमन्तश्वक्षुस्तव प्रचलितभ्रमरं च पद्मम्।। रघुवंश – 5 – 68

10. नेत्रव्रजाः पौरजनस्य तस्मिन्विहाय सर्वान्नृ पतीन्निपेतुः।
मदोत्कटे रेचितपुष्पवक्षा गन्धद्विपे वन्य इव द्विरेफाः।। रघुवंश – 6 – 7

11. कश्चित्करांभ्यामुपगूढनालमालोलपत्रा मिहतद्विरेफम्।।
रजोभिरन्तः परिवेषवन्धिं लीलारविन्दं भ्रमयांचकार।। रघुवंश – 6 – 13

12. तासां मुखैरासवंगन्धर्मैर्व्याप्तान्तराः सान्द्रकुतूहलानाम्।
विलोलनेत्रभ्रमरैर्गवाक्षाः सहस्त्रपत्रामरणा श्वासन्।। रघुवंश – 7 – 11

13. सा हि प्रणयवत्पासीत्सपल्योरुमयोरपि।
भ्रमरी वारणस्येव मद्निस्पन्दरेखयोः।। रघुवंश – 10 – 57

14. वनेषु सायंतनमल्लिकानां विजष्म्णोद्गन्धिषु कुड्मलेषु।
प्रत्येकनिक्षिप्तपदः सशब्दं संख्यामिवैषां भ्रमरश्वकार।। रघुवंश – 16 – 47

15. महीभष्तः पुत्रवतोऽपि धष्टिस्तस्मिन्नपत्ये न जगाम तर्षप्तिम्।
अनन्तपुष्पस्य मधोर्हि चूते द्विरेफमाला सविशेषसंगा।। कुमार संभव – 1 – 27

16. मधु द्विरेफः कुसुमैकपात्रे पपौ प्रियां स्वामनुवर्तमानः।
श्रष्ङ्गेणच स्पर्शनिमोलिताक्षी मष्गीमकण्डूयत कष्ण्सारः।। कुमार संभव – 3 – 36

17. सुगन्धिनिश्वासविषष्द्धतष्णं विम्बाबरासन्नचरं द्विरेफम्।
प्रतिक्षणं संभ्रमलोलहष्टिलींलारविन्देन निवारयन्ती।। कुमार संभव – 3 – 56

18. सौरम्यलुब्धभ्रमरोपगीतैर्हिरण्यहंसावलिकेलिलोलैः।
चामीकरीयैः कमलैर्विनिद्रैश्च्युतैः परागैः परिपिंगतोयाम्।। कुमार संभव – 13 – 27

19. मन्दानिलाकुलितचारुतराग्रशाखः पुष्पोद्गमंप्रचयकोमलपल्लवाग्रः।
मत्तद्विरेफपरिपीतमधुप्रसेकश्चित्तं विदारयति कस्य न कोविदारः।। ऋतु श्रृंगार – 3 – 6

20. प्रफुल्लचुतांकष्रतीक्षणसायको द्विरेफमालाविलसद्धनुर्गुणः।
मनांसि भेत्तुं सुरतप्रसंगिनां वसन्तयोद्धा समुपागतः प्रिये।। ऋतुश्रृंगार – 6 – 1

21. पुंस्कोकिलश्चूतरसासवेन मत्तः प्रियां चुम्वति रागहष्ट।
कूजद्द्विरेफोऽप्ययमम्बुजस्यः प्रियं प्रियायाः प्रकरोति चाटु।। ऋतु श्रृंगार – 6 – 16

22. समदम हुकराणां कोकिलानां च नादैः कुसुमितसहकारैः कर्णिकारैश्च सम्यः।
हषुभिरिव सुतीक्ष्णैर्मानसं मानिनीनां तुदति कुसुममासो भन्मयथोद्दीपनाय।।
ऋतुश्रृंगार – 6 – 29

23. पाकम्पितानि हृदयानि मनस्विनीनां वातैः प्रफुल्लसहकारकष्ताधिवासैः।
उत्कूजितैः परभष्तस्य मताकुलस्य श्रोत्रप्रियैर्मधुकरस्य च गीतनादैः।। ऋतुश्रृंगार – 6 – 34

24. रक्ताशोकविवाल्पिताधरमधुर्मत्त द्विरेफस्वनः कुन्दापीड विशुद्धदन्तनिकरः प्रोत्फुल्लपद्माननः।
चूतामोदसुर्गन्धमन्दपवनः श्रंषारदीक्षागुरुः कल्पान्तं मदनप्रियो दिश्तु वः पुष्पागमोमंगल्म।।
ऋतुश्रृंगार – 6 – 36

25. इदयुपनतमेवं रूपमविलष्टकान्ति प्रथमपरिगष्हीतं स्यान्न वेत्यव्यवस्यन्।
भ्रमर इव विमाते कुन्दमन्तस्तुपारं न च खलु परिमोक्तुं नैव श्वनोमि हातुम्।।
शाकुंतलम – 5 – 19

26. अकिष्टवालतरूपल्लवलोमनीयं पीतं मया सद्यमेव रनोन्सवेषु।
विम्वाधरं स्पंशसि चेद्भ्रमर प्रियायास्त्वां कारयामि कमनोदरवन्धनस्यम्।।
शाकुंतलम – 6 – 19, 2

27. रक्ताशोकरुचा विशेपितगुणो बिम्बाधरालक्तकः प्रत्याख्यातविशेषकं कुरबकं श्यामाञ्दातारुणम्।
भ्राकान्ता तिलक किया च तिलकैर्लगनद्विरेफांजनैः सावऽेव मुंखप्रसाधनविधौ श्रीर्माधवी योपिताम्।।
मालाविकाम – 3 – 5

28. मधुरस्वरा परमष्ता भ्रमरी च विवुद्धचूतसंगिन्यौ।
कोटरमंकेलावष्ट्या प्रबलपुरोवातया गमिते।। मालाविकाम – 4 – 2

3. भृंग

29. विपत्रपुष्पां नलिनों समुत्सुका विहाय भंगाः श्रुतिहारिनिस्वनाः।
पतन्ति मूढ़ाः शिखिनां प्रनष्त्यतां कलापचकेषु नवोत्पलाशया।। ऋतुश्रृंगार – 2 – 14

30. वनद्विपपानां नववारिदस्वनैर्मदान्वितानां ध्वनतां भुमुर्महः।
कपोलदेशा विमलोत्पलप्रभाः सभंगयूथैर्मद्वारिमिश्विताः।। ऋतुश्रृंगार – 2 – 15

31. पुंस्कोकिलैः कलवचोमिरुपात्तहपैः कूजद्मिरुन्मदकलानि वचांसि भंगौः।
लज्जान्वितं सविनयं हृदयं क्षणेन पर्याकुलं कुलगष्हेऽपि कष्तं वध्नाम्।।
ऋतुश्रृंगार – 6 – 23

32. आलिम्बिहेमरसनाः स्तनसक्तहाराः कंदर्पदर्पशिथिलीकष्तगात्रयष्ट्यः।
मसे मघौ मधुरकोकिलभंगनादैर्नार्यो हरन्ति हृदयं प्रसमं नराणाम्।। ऋतुश्रृंगार – 6 – 26

4. दशमा

33. श्रास्वाद्वद्भिः कवलैस्तष्णानां कण्डूयनैर्दशनिवारणैश्व।
अव्याहतैः स्वैरगतैः स तस्याः सम्राट् समाराधनतत्परोऽभूत्।। रघुवंश – 2 – 5

5. खददोत्त

34. गत्वा सद्यः कलमतनुतां शीघ्रसंपातहेतोः क्रीडाशैले प्रथमकयिते रम्यसानौ निषण्ण्याः।

अर्हस्यन्तर्भवनपतितां कर्तुमल्पाल्प मासं खद्योतालीविलसितनिमां विद्य दुन्मेषदर्षष्टिम्।।

मेघदूत उत्तरा – 21

6. लक्ष–कीट

35. सोपानमार्गेषु च येषु रामा निक्षप्तवत्यश्वरणान्सरागान्।
सद्यो हतन्यंकुमिरस्रदिग्धं व्याघैः पदं तेषु निधीयते मे ।। रघुवंश – 16 – 15

36. श्रपि त्वदावर्जितवारिसंभष्तं प्रवालमासामनुवन्धि वीरुधाम्।
चिरोज्झितालक्तकपाटलेन ते तुलां यदारोहति दन्तवाससा। कुमार संभव – 5 – 34

37. नितान्तलाक्षारसरागर जितैर्नितम्बिनीनां चरणैः सन्पुरैः।
पदे पदे हंसरुतानुकारिमिर्जनस्य चित्तं कियते समन्मयम्।। ऋतुश्रृंगार – 1 – 5

7. मधु मक्षिका तथा सरधा

38. मल्लापवर्जितैस्तेपां शिरोभिः स्मश्रुलैर्महीम्।
तस्तार सरधाव्याप्तैः स क्षौद्रपटलैरिव।। रघुवंश – 4 – 63

39. तत्रैश्वरो विष्टरभाग्यथावत्सरत्रमध्यं मधुमच्च गव्यम्।
नबे दुकुले च नगोपनीतं प्रत्यग्रहीत्सवममन्त्रवर्जम्।। कुमार संभव – 7 – 72

40. विदूषकः – (अपवार्य) उवदि्ठदं णअणमहु संणिहिद्मक्खिअं च । ता अप्पमत्तोदार्णि पेक्खं। (उपस्थितं नयनमधु संनिहितमक्षिकं च। तदप्रमत्त इदानीं पश्य।) मलविकाय – 2 – 2

8. मधुपा

41. मलयपवनविद्धः कोकिलालापरम्यः सुरमिमधुनिषेकाल्लन्धगन्धप्रबन्धः।
विबिधमधुपयूथैवेष्ट्यमानः समन्ताट्मवतु तव बसन्तः श्रेष्ठकालः सुखाय।।

ऋतुश्रृंगार – 6 – 37

9. पतंगा

42. काममस्तु वाणावसरं प्रतीक्ष्य पतंगवद्वहिनमुखं विविक्षुः।
उपासमक्षं हरवद्धलक्ष्यः शरासनज्यां मुहूरममर्श।। कुमार संभव – 3 – 64

10. पिपल्विका

43. निपुणिका – (विलोक्य) – आलोअदु भट्टिणी चूदंकरं विचिण्णन्तीणं पिपीलिआहिं दंसिदं। (अवलोकयतु भट्टिनी चूतांकुरं विचिन्वत्यो पिपीलिकामिर्दष्टम्। मालविकाय – 3 – 13/30

11. शलभ

44. तुरगखुरहतस्तया हि रेणुर्विटपविषक्तजलाद्रैवल्कलेषु।
पतति परिणतारुणप्रकाशः शलमसमूह इवाश्रमद्रुमेषु।। शाकुंलम – 1 – 30

12. षठ–पदा

45. तं प्राप्य सर्वावयवानवद्यं व्यावर्ततान्योपगमात्कुमारी।
न हि प्रफुल्लं सहकारमेत्य वक्षान्तरं कांक्षति षट्पदाली।। रघुवंश – 6 – 69

46. स्थानमाहिकमपास्य द्न्तिनः सल्लकींविटपमंगवासितम्।
आविमात चरणाय गह्णते वारि वारिरुहद्धषट्पदम्।। कुमार संभव – 8 – 33

47. वद्धकोशमपि तिष्ठति क्षणं सावशेषविवरं कुशेशयम्।
षट्पदाय वसतिं ग्रहीष्यते प्रीतिपूर्वमिव दातुमन्तरम्।। कुमार संभव – 8 – 39

48. उष्णालुः शिशिरे निपीदति तरोर्मूलालवाले शिखीनिमिंद्योपरि कर्णिकारमुकुलान्यालीयते षट्पदः। तप्तं वारि विहाय तीरनलिनीं कारण्डवः सेवते क्रीडावेश्मनि वैष पंजरशुकः वलान्तो जलं याचते।। विक्रमो रविश्याम – 2 – 22

13. रेशम – कीट

49. खर्जूरीस्कन्धनद्धानां मदोट्गारमुगन्धिषु।
कटेषु करिणां पेतुः पुंनागेभ्यः शिलीमुखाः।। रघुवंश – 4 – 57

14. वल्पि

50. रलच्छायाव्यतिकर इव प्रेक्ष्यमेतत्पुरस्ताद्वल्मीकाप्रारप्रमयति।
येन श्वार्म वपुरतितरां कान्तिमापत्स्यते ते वहेणेव म्फुरिनषचिना मोपरेम्या विध्वोः।।
मेघदूत – पूर्वा – 15

उपरोक्त अध्ययन से विदित होता है कि 'ऋतु श्रंगार' का वरुण कवि, एक महान प्रकृति प्रेमी (लवर आफ नेचर) भी है तथा कवि की सर्वोत्तम प्रतिभा का निदर्शन, प्रकृति के संदेश का मार्मिक उद्घाटन 'अभिज्ञान शकुन्तलम' में जाकर होता है कि किस प्रकार कवि ने भारत के विभिन्न भू–भागों एवं ऋतुओं के परिवर्तन की हृदयस्पर्शी एवं मार्मिक विवेचना की है, जैसे कि "नये–नये रंगों से लिखती नई कहानी, तन मन को पलभर में बदलती ये ऋतुयें बड़ी सुहानी" वाली बात अक्षरसः सही उतरती है।

आगे अध्ययन से यह भी विदित होता है कि मनुष्य अनादि काल से ही प्रकृति एवं पर्यावरण तथा जीवों एवं वनस्पतियों के साम्राज्य से जुड़ा हुआ रहा तथा मधुर संबंध साम्राज्य स्थापित किये हुये था। यह बात 'ऋतुश्रृंगार' के अध्ययन से पुष्ट होती है कि महाकवि ने किस प्रकार भारत की 6 भिन्न–भिन्न ऋतुओं का सविस्तार वर्णन किया।

इसके पश्चात अन्य रचना "मालविका ज्ञान मित्रम" के अध्ययन से विदित होता है कि हृदय को द्रवित करने वाली घटनायें किस प्रकार से चित्रित की गई हैं तथा "कुमार संभव" रचना में जनित एन्द्रियिक का उल्लेख मिलता है। प्रकृति प्रेम में महाकवि ने सरिताओं की तरंगों, लताओं के नर्तन हिरनों की छलाँगों, पक्षियों के कलरवों, वृक्षों के प्रसगों व पर्वतों के लुभावने दृश्यों का बहुत ही सटीक वर्णन किया है। इन सब गुणों ने कालीदास को महाकवि ही नहीं अपितु "विश्वबन्धु" भी बना दिया।

कालीदास ने प्रकृति को मूल "चेतना हीन" अथवा निष्प्राण (निर्जीव) नहीं माना अपितु अन्य प्राणियों की भाँति ही उसमें भी संवेदना और सुख–दुखः का भाव रहित माना है। मानवीय सौंदर्य का मापदंड प्रकृति सौंदर्य भी है। उन्होंने प्रकृति के मार्मिक प्रभाव को कितना हृदयॉगम किया था, यह समझने के लिये उनकी कृतियों पर गहन शोध एवं अध्ययन की आवश्यकता वर्तमान में अत्यधिक है।

परिचर्चा (डिसकसन)

महाकवि कालीदास द्वारा संस्कृत में रचित महान रचनाओं के गहन एवं विस्तृत अध्ययन से पता चलता है कि कविवर को प्रकृति, पर्यावरण एवं जीव विज्ञान का कितना गहन ज्ञान था। प्राणि जगत एवं वनस्पति जगत को स्थल–स्थल पर सामंजस्य स्थापित करते हुये जिस तरह से उदाहरण प्रस्तुत किये, उससे यही निष्कर्ष निकलता है कि कालीदास ही एक मात्र 200 विक्रम संवत में विश्व के प्रथम एवं महान कीट विज्ञानी थे। उन्होंने कीटों की सबसे सही तथा एक मात्र परिष्कृत परिभाषा – षटपादा (सिक्स लैग्ड) याने छः पैरों वाला जन्तु कहकर परिभाषित किया। जिसको कि हजारों वर्षों बाद विश्व विख्यात जीव विज्ञानी, (कीट विज्ञानी) पी0 के0 लिटरिले ने भी कीटों को षटपाद (सिक्स लैग्ड) वाले जन्तु कहकर अनुमोदित किया। तबसे अब तक यही एक मात्र संक्षिप्त एवं परिष्कृत व सर्वमान्य परिभाषा कीटों की चली आ रही है

निष्कर्ष

उपरोक्त चर्चा एवं भिन्न–भिन्न स्थलों पर कीटों एवं प्रकृति तथा पर्यावरण संबंधी उदाहरणों से विदित होता है कि महाकवि कालीदास जीव विज्ञान/कीट विज्ञान संबंधी विशिष्ट ज्ञान भी रखते थे। अपने जीवन काल में उन्होंने प्रकृति एवं जीव विज्ञान पर जो प्रकाश डाला वह 200 बी0सी0 से बीसवीं सदी तक अपने आप में सर्वोत्कृष्ठ प्रतीत होता है। यदि उनकी सभी कृतियों का विस्तार पूर्वक अध्ययन किया जाये तो जीव विज्ञान/कीट विज्ञान के इतिहास में एक अध्याय और जुड़ सकता है।

प्रस्ताव/सुझाव

ज्ञातव्य हो कि भारत सरकार के संस्कृत आयोग ने अपने एक प्रस्ताव में कहा था कि आगरा विश्व–विद्यालय तथा अन्य सभी विश्व–विद्यालयों में स्नातक तथा स्नात्कोत्तर स्तर के विज्ञान विषयों के पाठ्यक्रमों के साथ–साथ "पौराणिक संस्कृत ग्रन्थों/काव्यों" में चर्चित "जीव विज्ञान का इतिहास" (हिस्ट्री ऑफ बाइलौजी) नामक विषय का भी समावेश किया जाये, तथा इसे तुरंत कार्यान्वित भी किया जाये। (सचिव, भारत–सरकार, शिक्षा–मंत्रालय आदेश संख्या – एफ–23–7/58–एच–1, दिनांक 1 मई 1958 द्वारा पारित।)

परन्तु क्षोभ का विषय है कि तत्कालीन ऐक्जीक्यूटिव कौंसिल मीटिंग दिनांक 1 मार्च 1960 प्रस्ताव संख्या 650, पृष्ठ संख्या 245 में आगरा विश्वविद्यालय के मिनिट्स भाग–33 (ब) में उल्लेखित किया कि इस प्रस्ताव को लागू करना वर्तमान में संभव नहीं।

अतः भारत सरकार के पर्यावरण मंत्रालय एवं शिक्षा मंत्रालय से निवेदन किया जाता है कि संस्कृत आयोग द्वारा पूर्व अनुमोदित तथा भारत के शिक्षा मंत्रालय एवं विश्व विद्यालय अनुदान आयोग द्वारा समर्थित प्रस्ताव पर पुनः गहन विचार कर अपने अधीनस्थ वैज्ञानिक संस्थाओं जैसे 1. भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद, न्यू फारेस्ट देहरादून (आई0सी0एफ0आर0ई0) 2. भारतीय जन्तु सर्वेक्षण संस्थान, कलकत्ता (जेड0एस0आई0) अपने अधीनस्थ सभी शोध संस्थानों में तथा विश्व–विद्यालय अनुदान आयोग भी भारत के सभी विश्वविद्यालयों में इस क्षेत्र में अनुसंधान संबंधी परियोजनायें (प्रोजेक्ट) बनवाकर व पाठ्यक्रम में पौराणिक संस्कृत ग्रन्थों में रचित विज्ञान/जीव विज्ञान/वनस्पति

विज्ञान/पर्यावरण/अरण्य संबंधी विषयों पर शोध व पाठ्क्रम तुरंत प्रारंभ करवाने हेतु आदेश करें तथा यथा संभव वित्तीय सहायता प्रदान करें, ताकि संस्कृत ग्रन्थों/पुराणों, वेदों, उपनिषदों द्वारा "जीव–विज्ञान के इतिहास" की प्राचीन उपलब्धियों का पता लग सके। इसका भारतीय विज्ञान के इतिहास में एक नया अध्याय जुड़ सके तथा वर्तमान एवं आने वाली पीढ़ियाँ भी उन उपलब्धियों से लाभान्वित हो सके।

साथ ही पौराणिक संस्कृत में रचित महाकाव्यों/पुराणों, वेदों, उपनिषदों, ग्रन्थों में निहित विज्ञान संबंधी उपलब्धियों को जानने हेतु संस्कृत के प्रकाण्ड विदानों का आह्वाहन कर उन ग्रन्थों का हिन्दी भाषा में रूपान्तरण करने हेतु शोध शालाओं एवं प्राचीन संस्कृत रचित पुस्ताकालयों की स्थापना करने हेतु यथा–संभव अनुदान स्वीकृत करें ताकि पुरातन शोध को वर्तमान पीढ़ी अपने अध्ययन एवं चलन में लाकर लाभांवित हो।

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CORBETT'S HERITAGE IN KENYA : WE MUST PROTECT IT

*DR. RANJIT BHARGAVA

In 1947 Jim Corbett migrated to Kenya at the age of 72. He indeed was disgusted with the holocaust which accompanied the partition of India. He was also worried about the welfare of his elder sister Maggie, in case he died before her. Obcessed with these thoughts, Jim Corbett wanted to settle down at some place where a younger relative could look after Maggie and himself.

His nephew General Tom Corbett was farming in Nyeri in Kenya and Jim Corbett saw the younger relative, he was searching for, in this nephew. Earlier in 1922 Jim along with his friend Percy Wyndham had purchased a property in present day Tanzania, on the slopes of Mt. Kenya, and often visited the area. The landscape of the Aberdare Mountains, the foodhabits of its people, the presence of English and Hindi speaking people, and so on, produced an atmosphere akin to his loved Kumaon. So ultimately from Nainital he did go off to Nyeri-160 Km. from Nairobi.

In 1928 the famous British soldier Maj. Eric Sherbrooke Walker had constructed Hotel Outspan in Nyeri; and adjoining it, in 1938 he constructed a small cottage known as 'PAXTU' for Lord Baden-Powell, the founder of the Scout and Guide movement who as a Cavalry officer in India, two decades earlier, was noted for his adeptness in the sport of 'Pig sticking'. Baden-Powell stayed in 'PAXTU' till his death in 1941, and was buried in the Cemetery of Nyeri Church. From 1941 to 1947 this cottage remained vacant. Jim along with Maggie, lived in this very cottage from 1947 till his death on 19.4.1955 (Maggie lived on in 'PAXTU'). It was here that he wrote his famous books : 'Temple Tiger', 'My India', 'Jungle Lore', 'Man Eating Leopard of Rudrapryag' as well as 'Tree Tops' (The only book that he wrote in Kaladhungi was his classic: 'Man Eater's of Kumaon' in 1944). Today this cottage although a museum for Lord Baden-Powell and Jim Corbett, is in need for upkeep and proper maintainence.

Although Jim Corbett setteled in Kenya, his heart remained in India. He made himself known as "Jim Corbett of Nainital". The world famous Hotel Tree Tops has a "Corbett Corner" in his memory; and its old log books record Jim's visit to the Hotel; some with his nephew Tom. Here too his connection with Nainital finds mention. Jim remained unreconciled to leaving Nainital and at the time of his death he was negotiating the repurchase of his old residence, Gurney House in Nainital.

Jim Corbett died of a short illness at the age of 80 and was buried close to the tomb of Lord Baden-Powell in the graveyard of the Nyeri Church on the Baden-Powell road just 1.5 km. from 'PAXTU'. His sister Maggie died over eight years later, and was interned in the

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same grave on 26.12.1963.

On December 29/30, 2006 along with my wife Shrruti and son Parikshit, I had the privilege of visiting 'PAXTU' as well as the grave of Jim Corbett in the Cemetery of Nyeri Church. I was stunned to see the pitiful and neglected condition of the grave, even the cement layer on it was badly cracked. It was my honour to present 1000 Kenyan Shilings to MR. CHARLES MACHARIA WERU, the caretaker of the cemetery for immediately carrying on urgent repair work to prevent water seeping inside.

JIM CORBETT WAS A PART OF NAINITAL, A LEGACY OF UTTARAKHAND, A FATHER FIGURE FOR US, AND ICON OF CONSERVATION IN INDIA. THROUGH THE WILD LIFE PRESERVATION SOCIETY OF INDIA I APPEAL TO THE GOVERNMENT OF UTTARAKHAND TO BUILD A SUITABLE MEMORIAL AT JIM CORBETT'S GRAVE AND MAINTAIN IT ; AND ALSO CONTRIBUTE FOR THE UPKEEP OF 'PAXTU'. THIS WE OWE TO OUR CULTURAL HERITAGE. OUR HIGH COMMISSION IN NAIROBI (KENYA) CAN SURELY ASSIST THE UTTARAKHAND GOVERNMENT IN THIS MISSION. I may add that my esteemed friend Dr. R.S. Tolia, Chief Information Commissioner Uttarakhand, had written to Shri S.K. Das Chief Secretary Uttarakhand about this matter on May 4,2007; on my behalf.

From the Archives of **"Cheetal"**

(I) INTRODUCTION OF LIONS IN CHANDRAPRABHA SANCTUARY

Late N.D. Bachkheti, IFS (Retd.)

The first and the last experiment of introducing the Asiatic Lion outside its present habitat was made in 1957 by releasing 3 lions (1 male and 2 female) in Chandraprabha forest of Varanasi district. In 1965, on being posted as Conservator of Forests, I made every effort to trace the lions but was unable to find any, though their number was reported to have grown to 11 in 1964. The Governmnet of India was naturally disturbed at the report of the disappearance of the lions suddenly and asked to submit a report on the failure of the experiment. A report was sent by me in 1974. As there have been many misapprehensions and misrepresentations about this experiment, the report is reproduced below in the hope that the readers will get the facts assessed by me in this regard.

One lion and 2 lionesses caught from Gir Forests were released in Chandraprabha sanctuary on 2.12.57 by the then Chief Minister U.P. amidst a large number of guests, Govt. officials, photographers etc. Chandraprabha sanctuary, situated in Varanasi district, covers an area of about 75 sq. km and has vegetation and climate quite akin to that of the natural home of the lions. It was hoped that the lions would thrive here. But the lions have disappeared and though their number was reported to have increased to 11 by 1965, there has been no trace after that.

2. The sanctuary area was fenced with a high barbed wire fence with the intention of keeping out the local cattle and also with an idea of restricting the movement of the lions. An inner enclosure of 10 acres was also erected with a 6' meshwire fence over which 7 plain wire strands at 10" interval were fixed. The idea was to release the animals in this inner enclosure first, allow them to get used to local conditions and then release them to the sanctuary area. It was reported that out of the 3 animals released on 2.12.57, one lioness jumped out of the inner enclosure immediately after release and the other two animals stayed in the inner enclosure till 8.1.1958 when it was broken at one end to allow the enclosed animals to walk to freedom of the sanctuary.

3. The reports regarding the increase of the lion family in and around the sanctuary were regularly received from the local guards and following births were reported :-

February	1958 --- One cub
January	1960 --- Two cubs
February	1962 --- One cub
March	1962 --- Two cubs
March	1964 --- Two cubs
May	1964 --- Two cubs

4. Thus 10 cubs were reported to have been born. Death of two cubs was also reported- one in May 1958 and another in June 1962. Thus by 1965 the lion family was reported to have increased to 11. During 1966 and

in subsequent two years serious and systematic tracking was done but no trace of lions was seen any where. It is highly doubtful that if there were 11 lions in Chandraprabha forest in 1965, they should have suddenly disappeared without having shown themselves there or elsewhere. One is inclined to doubt the accuracy of the reports. In fact the reports were too exact to be believed. For example, the monthly birth and death statement given above is more like a statement that is possible in a zoo or a farm. There were continuous reports of pug marks, their sizes and areas of the operation of each of the lions. It is doubtful in wild state if one could make out whether the particular lioness seen was *Rani* or *Jaishree* but the reports are quite emphatic about which lioness was operating where. I think such reports are results of preconceived ideas and so not scientifically acceptable. On one occasion one lion cub was reported to have been caught by a villager. After 3 days it was decided to release the cub in the forest. The report says that one Ranger, one asstt. Wild Life Warden and 2 W.L. Gds. and the villager took the cub to the spot from where it was caught. All the men hid themselves in bushes and the cub was let free. In a few seconds the cub made three or four cries of 'Pein-pein'. It was further reported that an animal of brownish colour came out from the shrubs and the cub went with its mother to the jungle. This is like a fairy tale and chances of its being real can be very thin.

5. My assessment is that the reporting of the progress of lions had been poor. Till 1965 no serious effort was perhaps made to verify the correctness of the reports. In early 1966 when I took over as Conservater of Forests I made it very clear to all concerned that the reports must be pucca and should be verified by the next higher authority. I myself made local investigations and also waited alongwith the DFO on a machan at a kill supposed to have been made by a lion. The killer did not return to the kill but came close, perhaps got suspicious and went away after giving an angry growl. Such growls are typical of tigers who get suspicious and leave the kill for good and must have been heard by many a sportsmen. After some time a tiger roar was heard in some distance confirming the identity of the visitor. It was obvious that it was a tiger kill but some enthusiastic subordinate reported that kill as that of a lion. I am quite sure that the local guards imagined that every kill made in and near the sanctuary and every carnivora pug mark left in the area was made by the lions. It seems they never bothered even to think that some other animal could also be responsible for these.

6. From 1966, the Wild Life and the territorial forest staff and the officers were more careful. The Chief Wildlife Warden also took a hard line and asked for systematic trackings to be done. The result was that there was no evidence to indicate that any lion existed in the area. So the reports of progress of the lions family should be cast aside as unreliable. I am of the view that the lions must not have survived for long. They might have died as a result of starvation or strayed far away and got killed by poaehers.

7. In my opinion the reasons for failure of the experiment were :-

(i) The male lion was captured in Junagarh forest on 9.2.56 and the females were captured on 26.12.55 and 16.2.56. Thus the three animals were kept in Junagarh Zoo and caged for nearly 2 years. During this period they were fed with dressed goat meat. The instinct to kill is likely to have got blunted in a long period of 2 years. I am doubtful if the animals could themselves made successful frequent kills in a new area with thin herbivore population for their survival. An example will show how the instinct to kill wears out after being given dressed meat for a long time. In late fifties, in Delhi Zoo there was a huge tiger named Bhim. This tiger used to get most excited when a horse or a bullock or a dog passed by. He would crouch in his yard as if to jump on the animal, would fix his eyes on the prey and stop lashing his tail-a perfectly normal behaviour of tigers before jumping on their prey. Now, once a month the large carnivora were given a freshly killed goat so that the animals could have the choice of eating entrails, softer parts, skin etc. On this particular occasion the throat of the goat was slit and thinking that he had done it well the keeper came out of the yard and lifted the trap door of the connected cell where Bhim was anxiously waiting to come out and grab his meal. Bhim came out and started running to the goat, when the goat got up on fours by some reflex action and then dropped dead. Bhim had, however, never confronted a living animal except through bars. Shocked at the unusual sight, he ran back to his cell and did not come out for over half an hour till he ensured (from a distance) that the carcass was lifeless. So, large carnivora become bad killers if they are given dead meat regularly for long periods. It is quite likely that these lions who had lived on dead meat for about 2 years were also bad killers. It is also likely that their tracking acumen also got rusted.

(ii) The idea of inner cell to acclamatise the lions to local conditions was excellant but is is doubtful if it was really effective in this case. 6' meshwire is no effective barrier against lions. 7 strands of plain wire at 10" interval above the mesh wire was obviously of no use as wild animals of even more massive built have been observed sailing through such obstructions with ease (I have seen a sambhar stag pass through a barbed wire fence, the strands of which were at 12" interval).

(iii) Chandraprabha and adjoining forest areas have thin population of herbivores. The population of cheetal, sambhar, nilgai and wild pigs is rather small and it is doubtful if these lions, handicapped in hunting capacity by being kept in captivity for long, were able to track and kill sufficient food for their survival.

(iv) Tigers also exist in Chandraprabha area. They would also be danger to the lions-firstly in physical encounters and secondly being more successful competitors in procuring the same food.

(v) Chandraprabha sanctuary is part of an extensive forest area and is also connected with adjoining areas of Bihar and M.P. There is possibility of the lions having strayed away in search of food and water.

(vi) Though, except for the occasional

shooting by the Maharaja of Varanasi, who had the shooting privilege over the Varanasi forests, no regular shooting was permitted in Varanasi area, yet possibility of poachers coming across the lions can not be eliminated. Moreover, the adjoining areas are regularly visited by shikaries and straying away of the lions would have been disastrous.

(vii) The encouraging reports, of which correctness is doubtful, must have made the local authorities complacent which must have resulted in indifference towards the welfare of the lions.

8. In my opinion it is worthwhile making further trial for establishing a second home for the Indian lion and I suggest following precautions to be taken:

1. The area selected should be quite large say at least 500 sq. km. It should be isolated forest so that the possibilities of the lions straying out are minimised.

2. The area selected should be free of tigers. If necessary the tigers should be destroyed.

3. The area should have sufficient herbivore population of deers, antelopes and wild pigs. It would be better to start a cheetal or neelgai or pig farm in the area some years in advance of releasing the lions to tide over the important period immediately after the release of the lions.

4. The animals should be of the natural pride size in number-2 males and 3 or 4 females would form a convenient group Age and size variations should be preferred.

5. The animals should be introduced as soon as after the capture as possible. It will be necessary to capture lions from Gir forest within the shortest interval and then transfer them straight to the site of release. Special capturing operations will have to be organised to minimise the period for which the animals have to be kept in cages. In fact, it would be advisable to transport a lion as soon as it is captured to the new site and release it in the inner enclosure mentioned below without waiting for others to be caught.

6. At the site of the release an inner enclosure of about 10 acres or so is absolutely necessary to enable the lions to be trained to be successful trackers and killers. The enclosure should have 15' high mesh wire fence and trap doors to the cages and to the outside area. The enclosure area should have natural forest vegetation and arrangements for flowing water.

7. Most important would be to train the lions to be killers. This can be done in the inner enclosure under the personal care of knowledgeable warden. This may take 3-4 months.

8. The release of lions should be in phases i.e. one or two animals only released at a time, as if by accident. If mesh wire fence is adopted and there is no distrubance the released lions are not likely to stray away but hover round the inner enclosure. In fact, by controlling the trap door it may be possible to allow them to come and go in view of the fact that the food will be more easily available in the enclosure.

9. Abundance of natural food near the place of introduction can be ensured from the game farm established in advance.

10. Each step of experiment must be planned in advance in full details. The detailed scheme should be examined by

knowledgeable persons and approved by technical bodies. No deviations should be premitted in any of the steps.

11. The whole scheme is likely to be quite expensive. The financial implications must be worked out and availabilitly of funds ensured as the scheme cannot tolerate any subsequent bottleneck.

12. The personnel in charge of the scheme is of greatest importance. The scheme should not be entrusted to routine officials for execution. The officer-in-charge and his assistants should be specially selected and trained for this purpose. The personnel selected should have scientific aptitute. Persons in the habit of talking high must be avoided, as they can lend to wrong conclusions.

13. Reliable reports about movement and welfare of the lions should be arranged. For this specially trained trackers will have to be maintained. Sifting of the collected information and checking by higher authorities will have to be arranged.

(II) Search for The Mountain Quail in Nepal?

Tej K. Shrestha*

SUMMARY

Mountain quail (Ophrysia superciliosa) a bird known only form a small number of specimens and smaller set of field observation, has long been a matter of ornithological curiosity because of its shy and elusive nature. This species has 'restricted itself to high mountain and dizzying passes. The mountain quails were once frequently reported by ornithologists in India. But due to loss of habitat, it is practically extinct in most of those reported areas. Recently ornithologists in India expressed their hope of finding mountain quails. This prompted an exploratory field study in the mountains of upper Karnali valley of western Nepal. According to local people Mountain quail formerly occured in western Nepal and was popularly known as small mountain black partridge (Sano-kalotitra or Virtitra). Hunters and trappers of upper Karnali valley and Dailekh area still are optimistic about the survival of this bird. In conclusion, it is believed that the mountain quail may occur in Nepal and possibly in quite a few numbers. The search will be continued in unexplored possible habitats of steep hills and rocky grasslands, where camouflaging makes the birds practically invisible. Therefore, a long term purposeful quest should be prompted in search of this ornithological question mark in western Nepal.

Introduction

Scientific information concerning the Mountain Quail (Ophrysia superciliosa) is lacking after it was last shot in 1876 in the slopes of Sherkadanda above Nainital. However, burning desire to discover this bird remained in the minds of naturalists, ornithologists and explorers. The main aim of the present paper is to present ecological data of the habitat of the species in Nepal in order to advance our knowledge about past distribution and possibility of rediscovering this long cherished elusive species.

Study Area

Lying in midhills of far western Nepal the Upper Karnali valley is characterized by steep hilly forest with high grassy vegetation and patches of bamboos. The Darchula and Dailek region lying between 1,500-3,500 m altitude was also surveyed. This area was explored for long-term study. Besides these hilly areas of Annapurna, Dhaulagiri particularly lying between Dana, Marpha, Tukche, Lete and upper Modi Khola valley were also surveyed.

Cover requirement of the mountain quail according to the literature sources are primarily hilly forest and windy pass flanked by grasslands. Ideal ranges however, appear to be rocky terrace containing about equal proportion of hill forest, grassland around cultivated crops and ungrazed grassland and rocky bushland.

Steep slopes frequented by rocky terrace exposed to sun and crags and cliffs facing south were also surveyed. Many ridge and spurs of mountains lying in the foothills of

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lesser Himalayas were surveyed. Many pheasant such as Kalij, Cheer, Koklas were found thriving well. This area was also explored for mountain quail. Many adjacent areas overgrazed by sheep, goat and cattle were not used for study purpose.

The steep cropland with plenty of weedy alpine grass, seeds, grains, shoots of bamboo, millets which are liked by other partridge and quails, was also explored.

Besides the deep gorge section of Kaligandaki near Sikha, Ghasa, Marpha, Dana and Tatopani of western Nepal inhabited by Chukor partridge and Hill partridge were explored. People of the area were interviewed and their knowledge about red-billed and red-legged birds were extrapolated.

The survey works were conducted in early spring, monsoon, autumn and cold winter days of year 1999-2001. Field data about possible habitat came from a small scale survey. It would be interesting to embark a longer study to check in Nepal whether these observations are typical and realistic.

Methods

The explorations of mountain quail in all possible areas were made by walking, waiting noiseless and motionless. Every dropped feather of birds, and faecal matter were collected. Bird sounds, vocalizations were taped out. Every other partridges and quails biocoenotically related to mountain quail were photographed. The topographic feature of surveyed area was photographed. The upper Karnali loop, Doti, Dailekh, Khaptad are found to be potential areas for further exploration.

To explore steep inaccessible area well-trained hunting dogs (Sikari Kukur) were used. Native hunters, trappers were used and involved in fieldwork. Besides that headmen of villages, witch doctors were interviewed, photographs and drawings were displayed to them so as to gain knowledge about whereabouts of the bird and sighting experience.

Habitat information about the mountain quail was collected from literature. Morphometrics and site specific data were compiled from the collected specimens at Tring Zoological Museum.

Adjoining Indian frontiers such as Dehradun, Pithoragarh, Nainital, Jhulaghat, Garhwal region were visited to have an idea about structure and composition of habitat of the mountain quail. The possible habitat of the mountain quail lies recorded in the forest of western Nepal, Dhaulagiri zone, Seti zone, Karnali zone, Mahakali zone etc.

1. The natural habitat of the mountain quail according to literature is forested steep hills covered with high jungle grasses with patches of thin bamboos. Most of the Mountain quail specimens were taken in past form Mussoorie and Nainital with altidude 1,000 to 3,500 m. These two places are separated hardly by a distance of 185 km.

Results

The mountain quail (*Ophrysia sperciliosa*, J.E. Gray) was last seen in Nainital in 1876. Nothing more was heard of this bird for centuries. Dr. Salim Ali also took great interest in search of this bird. Rieger and Walzthony (1990) undertook field investigation and contacted proponents who believed on the existence of Mountain quail in India (Dang 1988 and WWF India).

Ripley (1952) mentions a local name from Dailekh district to be *Sano Kalo Titra* in Nepal and he attributed this name to be more descriptive. The translation of this name into Nepali is "small black partridge". I made inquiries from villagers in Dailekh and was told another name "Vir titra". Local hunters reported that at least these kinds of birds having red bill and legs exist in Dailekh district along inaccessible steep hill slopes. I showed drawing and photographs of mountain quails to the headmen and hunters of the village and they were positive about the existence of this bird in wild. I followed up very closely habitat description and sight record made by ornithologists and hunters in India and looked for in the hope that Mountain quail will be propped up again if it is living. Sharp shrill produced by quails were heard in steep hill near Vakunde and Baglung- but could not identify properly the unfamiliar voice of the quails. I moved towards the source of the sound, expecting a flush of quail and failed many times.

Why is the Mountain quail so elusive? Why have not more bird watchers found it? The chief reason may be that the birds now inhabit the inaccessible steep hilly areas. Most bird watching in Nepal is usually carried out in forest, foothills, ravines where there are good trail and accommodation facilities. Bird watchers generally have little inclination for dry desolate grassy hills where access is poor and people are little educated. The mountain quail may also have been overlooked because it is extremely difficult to locate even when calling. The quail in general in Nepal appear to be resident rather then migratory in nature. They have feeding, breeding and wintering grounds. Possibility exists, therefore, that mountain quail may still exist in Nepal. But without more detailed observation no firm conclusion can be drawn.

Discussion

Bonaparte (1856) coined scientific name *Ophrysia supeciliosa* for mountain quail. Gray 1846, described mountain quail as *Rollulus superciliosus*. Later Blyth (1967), gave new generic neme to mountain quail as *Malacoturnix*. Ripley (1952) mentioned local name from Dailekh District: Sano Kalo Titra. Ripley (1952) puts mountain quail as relative of Blood pheasant (*Ithaginis*) and Spurfowl (*Galloperdix*). Ali (1977), believed that the mountain quails are closely related to Bush quail (*Perdicula*) and Blood pheasant (*Ithaginis*), due to the virtue of stout bill and stiff bristle like feather on forehead. According to him mountain quail share all three genera *Ithaginis*, *Perdicula* and *Ophrysia*.

Habitats of the Mountain quail are well described in the literature. Most authors agree that Mountain quail favour altitudinal range 1,500 to 2,500 m covered with grass, bushes and sparse trees, mainly oak. Mountain quail hunters in past such as Mackinnon, Hutton, Carurthen described its habitat. Mackinnon describes that Mountain quail favours a grass jungle, southern slope; on the other hand Hutton describes Mountain quail favours high jungle grass.... long high grass... and tall seed grass and the birds do not come out into open grass. Further, Carwithen, describes very steep, with patches of thin bamboo brush wood along

eastern slope. The present investigator searched mountain quail in all these habitats in western Nepal particularly in the upper Karnali valley. He could not detect presence of the bird.

There are diverse views concerning colouring of bill, log, plumage and sex difference of Mountain quail species displayed in Tring Zoological museum show a large variation in colouring depending on the state of preservation and age of specimens. As there are many birds with red leg and bill. It appears that mountain quail bill is coral red and not perfect red.

Acknowledgements

I would like to thank British Council for fellowship and Tring Zoological Museum for providing skins of mountain quail for examination and authorities of Tribhuvan University for granting study leave.

Sample Biography

Mountain Quail *Ophrysia superciliosa* (Gray)

Altitudinal range: 1,600,-3,500m.

Entire length: 25 cm.

Status and Habitat: Recorded in past form western Himalayas. If surviving to be looked for steep hills of far western Nepal. Found along grass and brush-woods on steep hills.

Field marks: A small long tailed bird resembling brown partridge, having distinct red bill and feet. This bird is sexually dimorphic. Male has black face with a white patch in front of eyes and another behind forehead and supercilium whitish, bordered above and below with black. Forecrown grayish brown and streaked with black. Wing light brown. Underparts including chin and throat black. A distinct white looping band extends from chicks. Undertail-coverts black, barred with white. Female has pinkish grey face. Eyebrow small but whitish. A broaded black band on either side of the crown. Upper plumage including wings cinnamon brown broadly streaked on nape and neck with triangular black spots on back. Underparts pale vinaceous brown streaked with chestnut and black from lower throat down. Flanks and vent vermiculated with brown and black. As this species is found in steep hills it is very hard to locate breeding population and study. Generally live in pair and small parties composing up to 30 individuals. An efficient runner, very loath to fly. Spends much time feeding and scratching the ground like domestic fowl. Sometimes dig snow to expose food material buried underneath. It is a bold and tame bird, allows very good target to hunter due to its stupid fearless habit.

Food: Moss, fern, shoot, lichen.

Call: Emit short monosyllabic call.

Breeding: Not known.

Distribution: In Nepal possible habitat of this bird lies near Darchula, Dailekh (Western Nepal), steep hills of upper Karnali river valley.

Range: It is presumably endemic bird. Known form western Himalayan foothills such as Jharipani, Badraj and Banog (Mussoorie), Sherkadanda (Nainital).

Reference: Ali and Ripley 1969, Rieger and Walzthony 1990, Shafiq, Javid and Kaul, 1998.

Based on the field work and available information it can be inferred that mountain

quail is still surviving in steep inaccessible hills of far western Nepal, and for discovering quail long term investigation in all possible habitats will be needed.

Potential Area Surveyed

Annapurna fringe

Darchula Dailekh Area

Upper Karnali

Upper Modi- Daligandaki Valley

Jumla- Jajarkot Region

Rolpa Region

Kaptad Region

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Cheetal

Quarterly News

More Members take up Membership of Wildlife Preservation Society of India

The enthusiasm to join the Wildlife Preservation Society of India continued to grow and the following individuals and organizations joined the Society as different types of members mentioned against each:

S. No.	Name of Individual / Organization	Type of Membership
1	Inspector of Wildlife, Sultanpur National Park, District Gurgoan (Haryana)	Institutional Life Member
2	O/c Details, Headquarters, Lucknow Sub Area Lucknow Cantt. (UP)	Institutional Life Member
3	Library Headquarters, Uttar Bharat Area,Barielly Cantt. (UP)	Institutional Life Member
4	DFO, Nanda Devi National Park,Joshimath	Life Member
5	Mr. Rishad Naorji,Director, Godrej Bhavan,4A, Home Street, 5th Floor, Fort,Mumbai 400 001	Life Member
6	Mr. Sunil Dubey38, Pathon Ki Magri Sevasharam ChourahaUdaipur (Rajasthan)	Annual Member
7	Wynberg Allen School,Mussourie	Annual Institutional Member
8	Ms. Swati Nagar 99, Govind Garh,State Bank Colony, Dehra Dun	Annual Student Member

Wildlife Preservation Society of India and WWF – India facilitate Dr. Ramana Athreya for his discovery of a new bird species.

In a function held on 11the May, 2007 at the Wildlife Institute of India, Dehra Dun, a young scientist of the National Centre of Radio Astrophysics, Tata Institute of Fundamental Research, Pune, Dr. Ramana Athreya was facilitated by WWF – India and the Wildlife Preservation Society of India for his discovery of a new bird, Bugun Liocichla (*Liocichla Bugunnorum* sp. nov.). Dr. Athreya has the distinction of being the only Indian who has discovered and written the scientific text of the only bird of India's 1226 species. The discovery was made in the Eaglenest Wildlife Sanctuary in West Kaming district of Arunachal Pradesh, India. Mr. Dhanjay Mohan and Mr. Pratap Singh both of Indian Forest Service, presently Associate Professors in WII and ardent bird watchers, helped Dr. Ramana in the mist netting operation of the bird. The function was attended by Mr. P. R. Sinha ,Director, WII, Mr. Ravi Singh – Secretary General, WWF – India, A. S. Negi Executive Vice President of the Wildlife Preservation Society of India, Samir Sinha, Head, TRAFFIC – India and scientists and trainees of WII & ICFRE, Dehra Dun and members of the Wildlife Preservation Society of India and officers of the Uttarakhand Forest Department.

Mr. Ravi Singh, Secretary General, WWF – India, announced the institution of the WWF – India Conservation Award for Outstanding Contribution to Conservation. Dr. Ramana Athreya was the first to receive this award at the above function.

Wildlife Institute of India presents the results of the census of tigers, co-predators and their prey species and habitat of the Central Indian Landscape at India Habitat Centre, New Delhi.

A presentation was made on 23rd May, 2007 at the India Habitat Centre, New Delhi by the Scientists of Wildlife Institute of India, Dehra Dun for the Central Indian Landscape comprising of Madhya Pradesh, Maharashtra, Rajasthan, Chhatisgarh, Andhra Pradesh and Orissa on the first ever estimation exercise of tigers, co-predators and their prey species and habitat carried out in all the tiger range states of the country on a massive scale. The presentation was given by Dr. Qumar Quereshi and Dr. Y. V. Jhala, senior scientists at the Wildlife Institute of India, Dehra Dun in the presence of the Secretary, Environment and Forests, Govt. of India, Inspector

General of Forests, Member Secretary, National Tiger Conservation Authority, Director, Wildlife Institute of India (WII), PCCF's and Chief Wildlife Wardens of concerned states, tiger experts, scientists and other officers of the state forest departments and Ministry of Environment and Forests. The presentation was highly appreciated for its methodology and scientific analysis. The presentation mainly dwelt on the following themes:

- State of tiger habitat
- Population trend of tigers
- Areas where tigers are decreasing and its cause
- The status of tiger's wild prey
- Where are the source populations (breeding units)
- Spacing and connectivity of populations and finally,
- The number estimate

Corbett records highest tiger density

Corbett National Park has the highest density of tigers in the world, revealed a study done by the Dehra Dun based Wildlife Institute of India (WII).

The results came as a silver lining at a time when the tiger population in most reserve forest areas in India is decreasing.

Data compiled with the help of satellite imagery, camera trapping and recording of pugmarks by WII showed that the country's first national park has one tiger in every 4.6 square kilometers. Corbett Park, spread over 520 sq. km. has 112 tigers.

A census carried out by the Uttarakhand Forest Department in 2005 had recorded one tiger in every 5.66 sq. km.

Ideally a tigress should have a territory spread across 50 sq. km. and a tiger needs an area of 300 sq. km., but in reserves like Corbett where there is no shortage of prey, it could be less, say Wildlife experts.

" A reserve should have atleast 20 such territories for the tiger population to thrive. While Sariska has only five such territories, Corbett has 50 of them", said Y. B. Jhala, a senior scientist at WII.

The latest tiger census carried out in Rajasthan, Maharashtra, Chhattisgarh and Madhya Pradesh using data received through satellites shows that there are 460 tigers in 16 reserve forest areas, Jhala said. In contrast the previous census carried out using old techniques like counting of pugmarks had shown there were 1233 tigers in these states.

According to the new survey, Madhya Pradesh has 276 tigers, Maharashtra 102, Rajasthan 32 and Chhattisgarh only 26.

WII is still studying the tiger population in the 500 sq. km. south of the Ramganga River, and the total tiger population for the Corbett National Park could go up, said Jhala.

A recent census carried out by WII in tiger reserves in Rajasthan, Maharashtra, Chhattisgarh and Madhya Pradesh using latest techniques showed a 60 percent decline in tiger population in these states.

Source: Hindustan Times, New Delhi.

June 11, 2007

Finally, wildlife crime bureau gets green light

Nitin Sethi / TNN

New Delhi : The Wildlife Crime Control Bureau is finally going to see the light of day. Government has finalised the proposal and it should be notified before the Convention on International Trade in Endangered Species (CITES) meeting takes place in the first week of June.

The proposal had been stuck between the environment and forests ministry and the finance ministry, threatening to embarrass the government at the international meet. Non-implementation of the plan to set up the bureau would have been read as India's weak response to poaching.

The bureau, mandated under the recent amendment to the Wildlife Protection Act, will have 105 posts and will be under the ministry of environment and forests. It will be headed by the Additional Director-General of Forests. The bureau is to have 10-12 posts open to officers on deputation. These posts are meant to ensure pulling in of expertise from other security agencies as well as customs and other wings of the government.

· The existing regional offices of the ministry, which till date were looking after inter-state issues, will be merged under this bureau and two new regional offices will be created. Along with this, two custom posts will also be strengthened with adequate staff to check cross boundary trade of wild animal parts.

· The bureau will have its own public prosecutor as well as constables for making arrests. The offices of the Chief Wildlife Wardens (in-charge of wildlife protection at the state level) will also be strengthened under the new provision.

· The bureau, as provided under the Act, will collect intelligence related to organised wildlife crime activities and share it with the states and establish a centralised wildlife crime data bank. Just as in the case of the Central Bureau of Investigation, it will undertake investigations only when requested by the states. This had been a bounding fear among the states that the bureau may over run the policing powers of the state, which have been taken care of in the finalised provisions.

· The formation of the bureau has been stuck in the bureaucracy for almost two years after the Tiger Task Force set up by the PM in the wake of the Sariska fiasco had recommended setting up of a 'lean and mean' bureau to fight the menace of organised poaching. But the finance ministry had taken a strong objection to the idea of setting up a 180 – strong bureau. In this process, the draft proposal for the bureau had seen more than five revisions.

The bureau will be under the ministry of environment and forests

Source : The Times of India, New Delhi, Friday, May 25, 2007.

Children to bear the brunt of global warming : Report

London : Children will increasingly bear the brunt of global warming, a report said on Friday, while another said the climate would continue to heat up in coming decades regardless of efforts to curb emissions of carbon gases.

A third report, coming as scientists on the Intergovernmental Panel on Climate Change finalise their analysis of what climate change will do to the planet this century, said business was already feeling its effects.

The Save the Children charity said up to 175 million children would be affected every year over the next decade by climate related disasters like droughts, floods and storms. This, it said, was 50 million a year more than in the 10 years to 2005.

Being society's vulnerable members, children would be hurt disproportionately, and millions more would be killed, forced from their homes or hit by hunger and disease.

"Children are already bearing the brunt of climate change and there will be millions more children caught up in climate – related natural disasters every year," said Jasmine Whitbread, head of Save the Children UK.

Scientists predict global average temperatures will rise by between 1.8 and 4.0 degrees Celsius this century, mainly due to burning fossil fuels for power and transport. Business is already starting to feel adverse effects, according to another study on Friday by catastrophe risk modeling firm Risk Management Solutions. (RMS).

It said financial losses from weather-related catastrophes had risen on average by two percent a year since the 1970s, and pointed to the devastation wrought by Hurricane Katrina in 2005. "Wealthy developed countries have much greater means than poorer countries to deal with the increased costs of weather-related catastrophes and to adapt to the changing climate hazards," said RMS research officer Robert Muir-Wood.

"However, even the wealthiest countries will find it a challenge to adapt quickly and effectively to the increased hazards posed by climate change," he added.

Britain's Environment Agency said in another report on Friday that because of the time delay in the warming effects of carbon gases in the atmosphere, temperatures would continue to rise for the next 40 years regardless of emissions curbs. As a result, the country would have to pour resources into coping with events like flooding and torrential rain storms.

"Our present efforts to reduce emissions will prevent destabilization of the climate during the second half of the century," Environment Agency chief Barbara Young said. "But for now we need to adapt to changes that are for all practical purposes unavoidable and committed," she added.

REUTERS

Source : The Times of India, New Delhi, Tuesday, April 10, 2007.

UN warms up on global meltdown

Billions will be hit by flood and famine, warns the UN climate report

Global warming will put billions of people at risk of flooding and famine within a generation, warned the United Nations yesterday.

Delivering its bleakest assessment of the problem, the UN added that up to 30 per cent of species could be extinct if temperatures continued to rise.

Agreement on the wording of its report, however, came after an all-night session of tense negotiations in Brussels, Belgium. Scientists accused the world's largest producers of harmful carbon dioxide emissions – including the US, Russia and China – of watering down the conclusions.

Key sections were deleted from the report, and scientists were provoked into confronting government negotiators whom they feared were toning down their findings.

The UN's top climate official Yvo de Boer admitted the report was weakened by the deletion of some elements but insisted it "will send a very, very clear signal" to governments.

The 21-page document summarising the work of 2,500 scientists from 130 countries warned that without swift action, up to 3.2 billion faced water shortages. At the other extreme,

the Intergovernmental Panel on Climate Change said that flood waters could claim up to seven million victims in Tokyo and New York by 2080.

"It is the poorest of the poor in the world who are going to be the worst hit," said Rajendra Pachauri, IPCC chairman. "This does become a global responsibility."

The panel's detailed look at the potential impact on communities if nothing is done aims to galvanise politicians into a united response. Climate change has already started with wilder weather patterns and increased temperatures, it said. Billions of people across every continent will be affected, it claimed.

A temperature rise of up to 2-degrees-Centigrade from averages in the 1990s would see one third of the earth's species displaced or wiped out. Disappearing glaciers in the Himalayas would disrupt water supplies, affecting billions across India, China, Nepal and Bhutan.

In Europe, Alpine glaciers would disappear.

The report will be presented, in June, to the G8 summit of the world's richest nations when the European Union is expected to pressurise the US to act on fossil fuel emissions.
MUMBAI MIRROR

Source : METRONOW 09-04-07

We're wiping out 3 species every hour

UN Calls For Quick Human Action To Stem Extinctions

Oslo : Human activities are wiping out three animal or plant species every hour and the world must do more to slow the worst spate of extinctions since the dinosaurs by 2010, the United Nations said on Tuesday.

Scientists and environmentalists issued reports about threats to creatures and plants including right whales, Iberian lynxes, wild potatoes and peanuts on May 22, the International Day for Biological Diversity.

"Biodiversity is being lost at an unprecedented rate," UN secretary general Ban Ki-moon said in a statement. Global warming is adding to threats such as land clearance for farms or cities, pollution and rising human populations. "The global response to these challenges needs to move much more rapidly, and with more determination at all levels – global, national and local," he said.

Many experts reckon the world will fail to meet the goal set by world leaders at an Earth Summit in 2002 of a "significant reduction" by 2010 in the rate of species losses. "We are indeed experiencing the greatest wave of extinctions since the disappearance of the dinosaurs," said Ahmed Djoghlaf, head of the UN Convention on Biological Diversity. Dinosaurs vanished 65 million years ago, perhaps after a meteorite struck.

"Extinction rates are rising by a factor of up to 1,000 above natural rates. Every hour, three species disappear. Every day, up to 150 species are lost. Every year, between 18,000 and 55,000 species become extinct," he said.

"The cause : human activities."

A "Red List" of endangered species, however, lists only 784 species driven to extinction since 1500 – ranging from the dodo bird of Mauritius to the golden toad of Costa Rica.

Craig Hilton-Taylor, manager of the list compiled by the World Conservation Union grouping 83 governments as well as scientists and environmental organisations said the hugely varying figures might both be right, in their way. "The UN figures are based on loss of habitats, estimates of how many species lived there and so will have been lost," he said. "Ours are more empirical – those species we knew were there but cannot find."

UN climate experts say global warming, blamed mainly on human use of fossil fuels, will wreck habitats by drying out the Amazon rainforest, for instance, or by melting polar ice.

The World Conservation Union also said that one in every six land mammals in Europe was under threat of extinction, including the Iberian lynx, Arctic fox and the Mediterranean monk seal. "The results of the report highlight the challenge we currently face to halt the loss of biodiversity by 2010," European Commissioner Stavros Dimas said.

Another report by a group of farm researchers said that global warming may drive many wild varieties of plants such as potatoes and peanuts to extinction by mid-century, wiping out traits that might help modern crops resist pests or disease.

REUTERS

Source : The Times of India, New Delhi, Thursday, May 24, 2007.

Taking the tiger by the tail

India should oppose tiger farms and create natural habitats with ample biodiversity for the animal

THE INTERNATIONAL meet on the trade of endangered species, Convention on International Trade in Endangered Species (CITES). Conference of Parties, starts on June 3 in The Hague. Sanctuary editor Bittu Sahgal, who will be speaking on behalf of the coalition of 35 international NGOs on how it is imperative to stop China from legalising 'tiger farms' and the future of big cats in India.

The critical issues to be dicussed at the 14th CITES conference....

As always, it is going to be a battle between those who wish to commercialise wildlife and those who believe that species such as tigers, whales and elephants are so critically poised that any thing less than total protection will tip them over the abyss of extinction. Enforcement is a major theme at this conference that will be looking for evidence of intelligence-led enforcement being used to combat wildlife crime, including in India and China where individuals controlling illegal trade in tiger parts and derivatives continue to operate. Ensuring China makes its tiger trade ban permanent, increases investment in enforcement, consolidates and destroys stockpiles of tiger bone and phases out tiger farms is going to be the greatest challenge of them all.

The coalition's stand on tiger trade/wildlife management.....

My primary purpose is to ensure that the Indian government does not through a stroke of temporary insanity endorse the lethal Chinese proposal to slaughter tigers for money and also ensure that fence-sitting nations are aware that the eyes of the world are upon them. There are a slew of other issues, but this is my main objective and that of over 35 NGOs who oppose China.

China has indicated that it intends to open its trade in farmed tigers: what India can do...

On the eve of his retirement as the secretary, Ministry of Environment and Forests, Prodipto Ghosh made an astounding statement virtually expressing his personal approval of the Chinese proposal to kill farm-grown tigers. Such officers embarrass India, which has a long history and culture of sensible conservation policy. We have got a force of 1 million 'Kids for Tigers' who will be protesting such illogical steps.

Some say that the ban on tiger trade has not worked and therefore it is time to try a new approach...

The ban on tiger trade has worked. That is why we still have tigers g
around though people had predicted they would die out before 2000. The problem is that in the past decade the political support for protection of tigers and their forest home has withered. In the crossfire between poaching and habitat loss, one of the most charismatic animals in the world is being lost. Tigers need protection and space. Giving them space (forests) will ensure India's water security as over 300 rivers originate from tiger forests.

Farmed tigers will one day be placed into the wild, ensuring survival of wild tigers: is this a feasible idea?

It is not feasible by any measure. Tiger experts know this. Bureaucrats and tiger farmers are putting such smoke-screens out so they can somehow cash in on the demand for tiger parts. If we want tigers to live, we need to give them exclusive areas in which to survive.
Here, a myriad plants and animals --
biodiversity -- will also survive. And these forests which sequester carbon, will help us counter climate change.

The latest tiger numbers released by Wildlife Institute of India is dismal. What is the future of big cats in India?

The Wildlife Institute of India confirmed what we already knew. A decade ago we had warned that protection standards were falling and that tigers were being lost. I still remember when in the early 1990s - the then Director of Project Tiger, Arin Ghosh misled Parliament by denying tiger deaths, even as other forest officers officially recorded a large number of dead tigers. The Projct Tiger Directorate was still in denial mode as recently as six months ago. Today the WII has made it impossible for such falsehoods to be propped up any longer.

A separate ministry for wildlife...

We must bifurcate the Ministry of Environment and Forests. The Prime Minister ordered it, but his instructions were ignored. The PMO should find out why and take the responsible officers

to task because their dereliction of duty has resulted in the death of hundreds of tigers.

There is a plan to relocate tigers in Sariska. Good idea?

Yes, provided the Rajasthan Government first takes action to relocate the villages from inside the park that have already indicated their willingness to shift, by moving a state highway out of the park and by qualitatively enhancing field protection.

Can tigers and humans coexit?

Can a cat and mouse coexist?

(*As told to Kumkum Dasgupta*)

Kumkum.dasgupta@hindustantimes.com

Source : Hindustan Times, New Delhi. June 3, 2007

Cheetal

Young Readers Section

CAPTIVE BREEDING

A PILLAR OF EX-SITU CONSERVATION

*Swati Nagar

The never ending greed of man has led the wild animals to their extinction.

Conservationists, environmentalist and other scientists who are concerned for these endangered species use several methods like in-situ and ex-situ conservation for maintaining these endangered species that are on the stake of extinction.

EX-SITU CONSERVATION –

Ex-situ conservation involves maintenance and breeding of endangered species under partially or wholly controlled conditions i.e. in labs, zoos, gardens etc.

It is more reliable as compared to in-situ conservation in which animals become prone to many diseases. They have to compete for food, mating, space etc.

While under controlled condition i.e. under human care, animals are provided with all the necessary conditions required for life and breeding, in natural habitats, the endangered species sometimes do not get suitable mate for breeding and this could become a factor for their extinction (as they are not able to continue their generation). The solution to this problem is ex-situ conservation and captive breeding.

CAPTIVE BREEDING :-

It involves capturing and breeding of animals in captivity where all the necessary conditions required for breeding and living are provided which enable the species to secure their generations from stresses that they face, like hunting, poaching etc.

Long term captive breeding is for such animals which have lost their habitat permanently. Captive Breeding is done in Zoos or Botanical gardens where many species of plants and animals are regularly bred since most of these species will not survive and propogate in their wild habitat.

E.g. – Pere David's deer (*Elaphurus davidiances*) is believed to have inhabitated in the alluvial plains of northern China. The rapid spread of agriculture and human enterprise has led to its extinction in wild. A small herd was maintained at – Imperial hunting Park in Peking in China. The last animal from this park died in 1920. But fortunately a pair was taken by Abbes Armond David and it played a vital role in the continuation of this species till today (in captivity).

Similarly, Prezwalski's horse (*Equus prezwalski*) is another case which is bred in captivity.

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All the specimens of this species are kept in zoos of Munich and Prague. Some more familiar examples are of Siberian tiger (*Panthera tigris altaica*) and Addax (*Addax nosomaculatos*). Siberian tiger is easily hunted due to its conspicuous pugmarks on snow and preyed for its skin and bones while Addax is paying for its tasty flesh.

Thanks to all those conservationist who employed ex-situ conservation method timely for such endangered animals, otherwise these animals would be in the list of extinct animal species today.

In 1992 alone, 65 Siberian tigers were hunted. But due to captive breeding, about 300 Siberian tiger still survive in nature. Siberian tiger and Addax are maintained and bred in various zoos and their population is now increasing.

There are no. of species being treated and maintained by this method (captive breeding), since these animals now cannot survive in their original wild habitat due to changed conditions of their habitat and due to fear of being hunted. These species include Brown eared pheasant, Lion tailed macaque, European bison, Aruba Island rattle snake etc.

SHORT TERM PROPAGATION OR CAPTIVE BREEDING AND RELEASE

Above mentioned animals are kept for long term breeding since they do not survive in their wild conditions. Some animals are bred under human care, but not for long time, for such animals can survive in their wild habitat but due to certain reasons (like sudden increase in population of certain species, hunting, epidemic etc.) After breeding, they are released in their natural habitats. Such type of attempt was probably first made in Switzerland, it was Alpine Ibex (*Capra ibex ibex*) which earlier almost disappeared from the place. Later on, some spacimen were taken from Italy and bred at captivity in Switzerland and after that released in their habitat (in Switzerland). Similarly Tawny vultures (*Gyps fulvus*) in France are bred in captivity after much efforts. Short term breeding showed its potential during sixties when the unrestricted use of DDT and other pesticides led to the decline in the population of several bird species. Then man intervened and employed this technique to re-establish these species in their environment.

Besides these, many other methods are employed, like – many animals are translocated from their natural habitat to some other locality (Translocation).

Moreover, some species are released after being born in captivity or caught in infancy and brought up in captivity (Reintroduction)

Captive breeding is not always helpful as there are still many animals that can not breed successfully in captivity. Therefore, following are the circumstances under which captive breeding and reintroduction are undertaken :-

(1) When species come in direct conflict with man such as grey wolf, big cats etc.

(2) When species are brutally hunted as a food source and other product like hide, fur, horns, medicines like rhinoceros, tortoise, addax etc.

(3) When species is suspected to fall to some epidemic or other diseases, like black footed ferrets.

(4) When species are caught for pet trade.

(5) When species are present in small groups which are prone to some natural disaster.

Now a days, many new techniques are being developed. But instead of developing new techniques for preserving animals, we should also focus on solving the basic problems (hunting and other related problems).

A Day in a Wildlifer's Life

*Sumit Sinha,

How does it feel to be woken up by a Himalayan black bear in the dead of a freezing night? "A good room Service!" I would Say (only, the room I was in was a small, few microns thick tent). It was the sound of incessant sniffing (mmfff...mmfff...mmfff...) that woke me up and only then I realized that the beast was merely few inches away from my face, but thankfully on the other side of tent. Like a good wildlifer should do I laid myself very still and only with my eyes moving I tried to work out its silhouette against the full-moon lit night.

I was actually in the VOF-National Park trying to monitor the wildlife of the area, and what a note to start with-a black bear knocking on my door!
When I got out of my tent in the morning, I found my rucksack and hunter boots covered with snow and the bear's foot impressions 'washed out' due to Fresh snowfall. Nonetheless I found marks left by two other creatures. A Himalayan Weasel had passed by and it was surely followed by a red-fox. This certainly happened after the stormy snowfall and in the early morning hours, the time when the forest is most active.

When the sun ascended a little over the mountains, I diligently followed the tracks which at last disappeared near a mountain stream. I spotted two weasels near the stream in a playful mood and watched their antics for a while as they were unaware of my presence.

The day was destined to be fruitful for me, as a hard trek led me to a musk deer which was resting under a Rhododendron thicket, only it wasn't at all pleased to see me. It ran for its life like a gunshot gone awry, and descended the mountain top within a few seconds, then it worked its way through a gorge and climbed another mountain face (right in front of me!) Covered with snowladen Betula trees. Luckily I spotted it again. It stood steadily there, giving me ample time to focus my high power binoculars to see its beautiful canines and the animal as a whole.

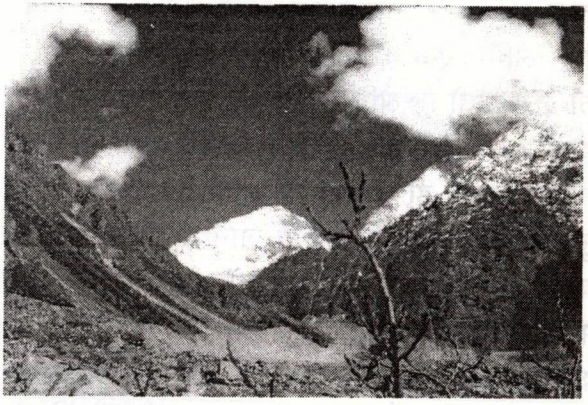
The rest of the day saw me collecting various samples (pellets, hairs, nest et cetera) It was a tiring day and a long trek at elevation of 4500m can be a little exhausting.
I had no time to waste so I took the refuge of my sleeping bag to straighten my back. I better gain my strengths, as tomorrow I shall be exploring the most exciting region on the earth-The domain of snow leopard!

So I went to sleep wondering about the rich fauna this alpine and subalpine region of Western Himalayas supports and what the next day might have in store for me.

*D-40 Race Course, Dehra Dun.

Himalayan Weasel (Mustela sibrica)

Photo by : Sumit Sinha



A view of Narparvat, Valley of Flowers

Photo by : Sumit Sinha

Rhododendron sp. in Valley of Flowers

Photo by : Sumit Sinha

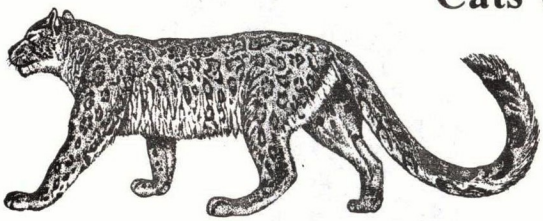
लेमिंग (*Lemming*) हज़ारों की संख्या में आत्महत्या क्यों करते हैं?

लेमिंग चूहों से मिलते–जुलते ऐसे प्राणी हैं, जो कुतर कर खाने वाले जंतुओं (*Rodents*) की श्रेणी में आते हैं। इनका रंग भूरा होता है। ये प्रायः उत्तरी गोलार्द्ध के ठण्डे भागों, जैसे अलास्का, उत्तरी–पश्चिमी कनाडा, नार्वे, स्वीडन आदि देशों में अधिक संख्या में मिलते हैं। इनकी लम्बाई 12 से 16 सेमी. (5 से 6 इंच) तक होती है। इनकी पूंछ छोटी और गोल होती है। ठण्ड से बचाव के लिए इनकी टांगें बालों से ढकी रहती हैं। ये घास–फूस से अपने घर बनाते हैं। पौधों की जड़ें, टहनियां और काई (*Moss*) इनका विशेष भोजन है।

लेमिंग बड़े ही विचित्र जंतु हैं। जब किसी क्षेत्र में इनकी संख्या बहुत अधिक हो जाती है, तब ये बड़ी संख्या में समुद्र में कूदकर आत्महत्या कर लेते हैं। क्या तुम जानते हो कि ये जंतु ऐसा क्यों करते हैं?

मादा लेमिंग एक वर्ष में दो बार बच्चे पैदा करती है। प्रारम्भ में यह एक बार में तीन से पांच बच्चों को जन्म देती है, लेकिन तीन वर्ष बाद एक मादा पांच के बजाय दस बच्चों को जन्म देने लगती है। इससे इनकी संख्या थोड़े ही समय में बहुत बढ़ जाती है। संख्या बढ़ने से इनके आसपास की भोजन सामग्री जल्दी ही समाप्त हो जाती है। भोजन की कमी और अधिक संख्या के कारण इनका जीना मुश्किल हो जाता है। तब ये जानवर हज़ारों की संख्या में अपने स्थान को छोड़कर समुद्र की ओर चल पड़ते हैं। रास्ते में ये फसलों और पौधों को बहुत नुकसान पहुंचाते हैं। बहुत से लेमिंग तो रास्ते में ही जंगली जानवरों द्वारा खा लिए जाते हैं। रास्ते की रुकावटों की बिना चिंता किए, इनका काफिला आगे बढ़ता ही जाता है। खेत–खलिहान, जंगलों को पार करते हुए ये समुद्र तट पहुंच जाते हैं और किसी ऊंचे स्थान से समुद्र में कूद पड़ते हैं। थोड़ी देर तो ये पानी में तैरते हैं, लेकिन बाद में वहीं डूबकर मर जाते हैं। इस यात्रा से कोई भी लेमिंग वापस नहीं लौटता। इस यात्रा में एक से तीन वर्ष का समय लग जाता है। समुद्र की ओर जाने का यह सिलसिला हर तीसरे या चौथे वर्ष होता ही रहता है। इस प्रकार समुद्र में डूबकर आत्महत्या करना ही इस जंतु की विचित्रता है।

Wildlife Photo Series for Identification
Cats (Part I)



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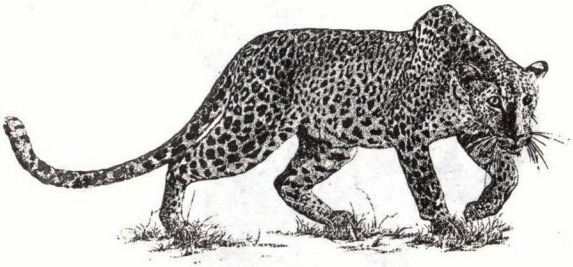

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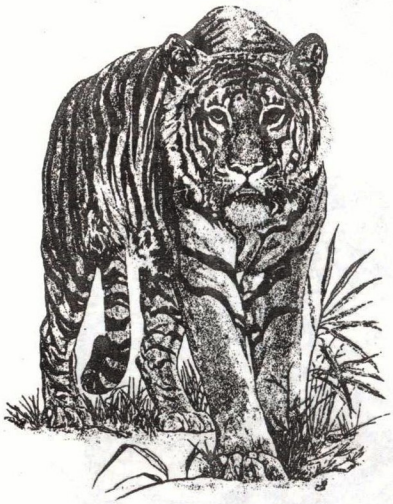

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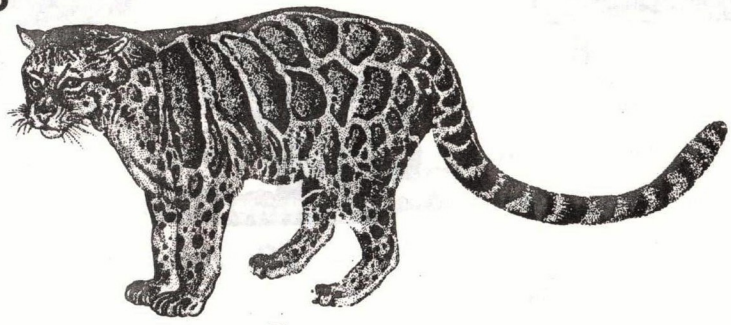
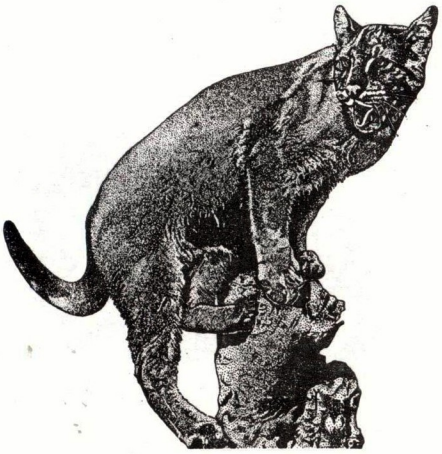


5

1. **The Snow Leopard**, *Pantheraor Ounce* **Local Name** *Tibetan Bhotia tkar, zig. sachak, Hills notrh of Simla barhat he: Kunawar thurwagh: East of Kumaon burhel haye (burhel killer).*
2. **The Leopard, or Panther** *Panthera pardus* **Local Names.** *hindi Tendwa, Chita, sona chita, chita bagh; Mar. karda, asnea, singhal bibalya wagh; kan. chirchu, chirate, stwangi, keeraba; Tamil chiruthai; Tel. chinna pult; Bir. tjot; Mal. pulllipoolee.*
3. **The Tiger** *Panthera tigris* **Local Name**, *hindi bagh, sher; Central India nahar, sela vagh; Mar. wagh; Tamil & Tel. poolee; Mal. kaduwa; kan, hoolee; Bur. char.*
4. **The Lion** *Panthera leo* **Local Names** *Hindi sher, sher babar, singh; Guj. untia bagh; Kahiawari sawach; Mar. singh; Mal Simham; Tam. Singham.*
5. **The Clouded Leopard** *Neofelis neburosa* **Local Names** *Lepcha pungmar, satchuk; Bhotia kung; Nepali amchita; Bur. thit kyoung.*



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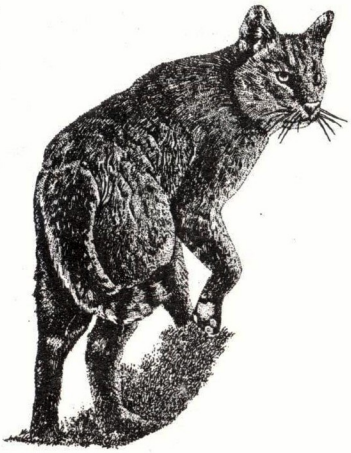

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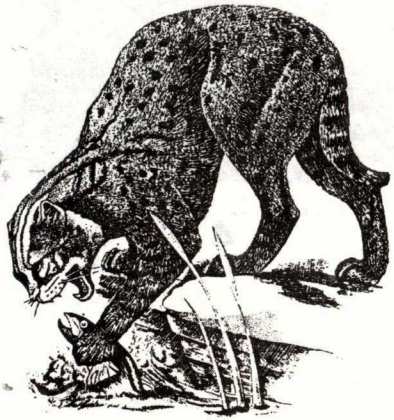

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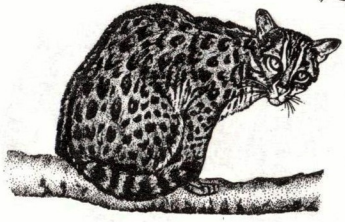

10

6. **The Golden Cat** *Felis temmincki*
7. **The Jungle cat** *Felis chaus* **Local Names.** *Hindi khatas, jangle billi; ben. ban bilar; Mar. baul, baoga; Tel. junka pilli; Tamil kartu poonay; Mal. kartu poocha; Kan. kada bekku; Bur. tor chaung*
8. **The Fishing Cat** *Felis viverrina*
9. **The Marbled Cat** *Felis marmorata*
10. **The Leopard Cat** *Felis bengalensis* **Local Names** *Hindi chita billi; Ben. ban bilar; Mar. wagati.*

Important Notice to our Readers, members and Contributers of Articles for Cheetal

1. *The annual subsciption to be paid by annual members falls due on 1st April of current financial year. Many of our annual members have not paid their subscription for past few years despite repeated requests. Due to apathy of such members the Society is facing great financial hardship. This may kindly be treated as an urgent notice for requesting members to pay the pending dues. this is your society & can run only with your support & sympathy. Members are earnestly requested to clear their outstanding dues even if they have to do it in installments.*

2. *Members are requested to clear their outstanding dues if any, they are also earnestly requsted that in addition to annual subsiptions, voluntory DONATIONS may be made to help the society to tide over its financial crisis.*

3. *Many of our regular contributers of articls have stopped contributing for Cheetal which is a matter of concern for the Society Members & contributers of articls are requsted to send their articls along with a soft copy (if possible) to make the journal more meaningful. Members are also requested to motivate & encourage their friends, aquintances & family members to contribute useful articls for Cheetal inclueding articles for Young Readers setion, Cheetal quarterly news and your views about the magezin or any particular article or suggestions for improvement. Any old Cheetal article of current relevance may also be suggested.*

A.S. Negi

Important Notice

Due to increase in printing charges of the Society's Journal, Cheetal, which is supplied free to all category members, we are compelled to enhance the membership fee of the Wildlife Preservation Society as under.

Kind of member	***Revised membership fee (In Rupees)***
Life member	*2500/-*
Institutional member	*400/- per year*
	3500/- for life.
Annual member	*250/- per year.*
Student member	*100/- per year.*

The revised fee will be applicable to new members with immediate affect. For existing annual members of all kind it will be applicable from 1-4-2007.

All members are entitled to a free copy of our Quarterly Journal - Cheetal.

The inconvenience highly regretted.

Phone : 0135-2652410

THE WILDLIFE PRESERVATION SOCIETY OF INDIA

(Established 1958)

7, Astley Hall, Dehra Dun, U.A.

APPLICATION FORM

I, ...

hereby apply to be admitted as a Patron/Life/Annual/Affiliated/Institutional/Student Member of the Wildlife Preservation Society of India.

My interests are .....

.....

Name .....

Designation .....

Address .....

.....

Phone No. & Email .....

Date of Birth .....

MEMBERSHIP

All Members get Cheetal (Quarterly) Journal FREE

1.	Patrons :	Rs.25000.00 and above
2.	Life :	Rs.2500.00
3.	Annual :	Rs.250.00 subscription per annum (April to March)
4.	Students (School)	Rs.100.00 per annum
5.	Affiliated : (Others similar bodies)	
6.	Institutional (Messes, Units, Schools, Colleges, Govt. Deptts., Corporations, Societies, NGOs etc.)	Rs.400.00 per year
7.	Institutional Life	Rs.3500.00

All Communications may please be addressed to the Hony. Secretary.

Signature Signature

The Wildlife Preservation Society of India

1. The aims and objects of the Society are as follows :-

(a) To promote interest and impart knowledge regarding the preservation and conservation of all forms of wildlife, particularly among the youth of the country.

(b) To cooperate with the Govt. of India and State Governments and with others Societies and Institutions having similar aims and objects in working for the interests of wildlife.

(c) To assist in enforcing and actively supporting the Forests Acts. Wild Birds and animals Protections Acts and Rules etc. of State Governments and the Indian Arms Act and Rules in so far as they pertain to wildlife and to bring to the notice of the authorities any infringement of the same and to assist in the detention and prosecution of offenders in respect of such laws.

(d) To advise and help the Govt. and wildlife administrators in the formation, maintenance and protection of Sanctuaries and National Parks, preservation of wildlife in general and endangered species of India in particular and in the introduction of exotic species into the country, rehabilitation of endangered species etc. and in the formulation and amendments of rules and acts, so as to conserve and increase wildlife stocks.

(e) To raise funds for carrying out the above aims and objects and to found and maintain museums reading rooms and libraries of natural history in order to disseminate knowledge regarding wildlife.

(f) To carry out publicity and propaganda for the preservation of wildlife in India by means of monographs, journals, films, filmstrips and other feasible methods.

(g) To assist members of the Society in obtaining facilities for viewing and photographing wildlife in India.

(h) To conduct research into the problem of Wildlife management in India, and in pursuance of this, to initiate, encourage and, where possible assist in the projects of the study of threatened species and related objects and to provide reference and research facilities for such work.

(i) To carry on such other activities which will serve the above subjects.

2. What membership of Wildlife Preservation Society of India will entitle you to ?

(1) You will become an active member of the growing group of Wildlife enthusiasts, who enjoy working for and spreading the knowledge of how to conserve India's heritage of wildlife for posterity.

(2) You will be entitled to the full use of the library of the Wildlife Preservation Society and of it reading room.

(3) You will receive a membership certificate.

(4) You will receive a personal Identification and Membership Card.

(5) You will be entitled to buy all publications of the Society at a concessional rate.

(6) You will be entitled to buy at concessional rates the Societies Greeting Cards, Calendars. Tie, Label badges and the Balance of Nature Game (specially Published in colour for its educative and recreational values).

(7) You will be supplied "Cheetal", the quarterly journal of the society free.

3. For membership particulars write to Honorary Secretary, Wildlife Preservation Society of India 7 Astley Hall, Dehra Dun.

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